

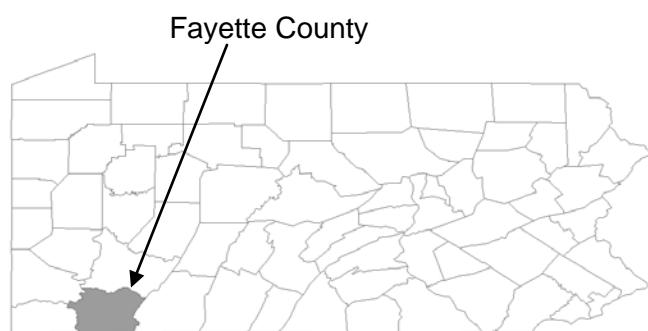
FLOOD INSURANCE STUDY

Please note: this Revised Preliminary FIS Report excerpt only includes newly revised data/updates. The unrevised portions will appear in the Final FIS Report.



FAYETTE COUNTY, PENNSYLVANIA (ALL JURISDICTIONS)

COMMUNITY NAME	COMMUNITY NUMBER
BELLE VERNON, BOROUGH OF	420457
BROWNSVILLE, BOROUGH OF	420458
BROWNSVILLE, TOWNSHIP OF	421621
BULLSKIN, TOWNSHIP OF	421622
CONNELLSVILLE, CITY OF	420459
CONNELLSVILLE, TOWNSHIP OF	421623
DAWSON, BOROUGH OF	420460
DUNBAR, BOROUGH OF	420461
DUNBAR, TOWNSHIP OF	421624
EVERSON, BOROUGH OF	420462
FAIRCHANCE, BOROUGH OF	420463
FAYETTE CITY, BOROUGH OF	420464
FRANKLIN, TOWNSHIP OF	421625
GEORGES, TOWNSHIP OF	421626
GERMAN, TOWNSHIP OF	421627
HENRY CLAY, TOWNSHIP OF	421628
JEFFERSON, TOWNSHIP OF	421629
LOWER TYRONE, TOWNSHIP OF	421630
LUZERNE, TOWNSHIP OF	421631
MARKLEYSBURG, BOROUGH OF	422606
MASONTOWN, BOROUGH OF	422572
MENALLEN, TOWNSHIP OF	421632
NEWELL, BOROUGH OF	420465
NICHOLSON, TOWNSHIP OF	422420
NORTH UNION, TOWNSHIP OF	421633



COMMUNITY NAME	COMMUNITY NUMBER
OHIOPYLE, BOROUGH OF	421615
PERRY, TOWNSHIP OF	421634
PERRYOPOLIS, BOROUGH OF	421616
POINT MARION, BOROUGH OF	421617
REDSTONE, TOWNSHIP OF	421635
SALTICK, TOWNSHIP OF	421636
SMITHFIELD, BOROUGH OF	421618
SPRINGFIELD, TOWNSHIP OF	421638
SPRINGHILL, TOWNSHIP OF	421639
STEWART, TOWNSHIP OF	421640
SOUTH CONNELLSVILLE, BOROUGH OF	421619
SOUTH UNION, TOWNSHIP OF	421637
UNIONTOWN, CITY OF	420466
UPPER TYRONE, TOWNSHIP OF	420467
VANDERBILT, BOROUGH OF	421620
WASHINGTON, TOWNSHIP OF	421641
WHARTON, TOWNSHIP OF	421642

REVISED PRELIMINARY:
JUNE 27, 2014



Federal Emergency Management Agency
FLOOD INSURANCE STUDY NUMBER
42051CV001A

BDF was computed by first dividing each basin into thirds. Then within each third, the drainage system is evaluated and each assigned a value according to four aspects:

- Channel Improvements
- Channel linings
- Storm drains, or storm sewers
- Curb-and-gutter streets

Additionally, new hydrologic analyses were performed by GG3 for all flooding sources with base level analyses (Zone A). Peak flows were computed for the 1-percent-annual-chance-flood events as required for Zone-A base study areas using USGS Scientific Investigations Report 2008-5102. The impacts of urbanization were not evaluated for base level analyses.

Peak discharge-drainage area relationships for the 10-, 2-, 1-, and 0.2-percent-annual-chance floods for each stream studied by detailed methods are presented in Table 11, “Summary of Discharges.”

Table 10 – Summary of Discharges

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ. MILES)	PEAK DISCHARGES (cfs)			
		10%- ANNUAL- CHANCE	2%- ANNUAL- CHANCE	1%- ANNUAL- CHANCE	0.2%- ANNUAL- CHANCE
BACK CREEK					
At the confluence with Indian Creek	11.8	*	*	3,220	*
BENNINGTON SPRING RUN					
At the confluence with Lick Run	2.1	310	416	450	535
Approximately 2,000 feet upstream of the confluence with Lick Run	1.9	290	396	420	475
Downstream of National Pike	1.8	280	510	620	970
BENNINGTON SPRING RUN SPLIT FLOW					
At the confluence with Lick Run	*	0	135	231	526

* Data Not Available

Table 10 – Summary of Discharges (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ. MILES)	PEAK DISCHARGES (cfs)			
		10%- ANNUAL- CHANCE	2%- ANNUAL- CHANCE	1%- ANNUAL- CHANCE	0.2%- ANNUAL- CHANCE
BREAKNECK RUN					
At the confluence with Whites Run	7.1	*	*	2,050	*
Upstream of the confluence of unnamed tributary	4.8	*	*	1,740	*
BROWNS RUN					
At the confluence with Monongahela River	17.9	*	*	3,960	*
BUTE RUN					
At confluence with Redstone Creek	6.7	*	*	1,550	*
CHEAT RIVER					
At the confluence with Monongahela River	1,422	75,000	118,600	142,800	205,700
COAL LICK RUN					
At the confluence with Redstone Creek	6.1	1,100	1,770	2,150	3,130
At West Fayette Street	5.3	940	1,530	1,850	2,700
At Lebanon Avenue	4.1	530	940	1,150	1,770
CONNELL RUN					
At confluence with Youghiogheny River	3.1	650	1,120	1,360	2,030
Approximately 490 feet downstream of the pavilion in the Park	2.9	595	1,060	1,290	1,920
COVE RUN					
At the confluence with Redstone Creek	13.1	*	*	2,080	*
Upstream of the confluence of Shutes Run	4.8	*	*	1,110	*
DOWNERS RUN					
At the confluence with the Monongahela River	6.3	900	1,700	2,150	3,500

* Data Not Available

Table 10 – Summary of Discharges (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ. MILES)	PEAK DISCHARGES (cfs)			
		10%- ANNUAL- CHANCE	2%- ANNUAL- CHANCE	1%- ANNUAL- CHANCE	0.2%- ANNUAL- CHANCE
LICK RUN OVERFLOW At the confluence with Bennington Spring Run	*	22	246	379	820
LICK RUN SPLIT FLOW At the confluence with Lick Run	*	101	456	733	1,396
LITTLE REDSTONE CREEK At the confluence with Monongahela River	12.7	1,350	2,450	3,100	5,300
At the confluence of Tributary A to Little Redstone Creek	6.7	900	1,600	1,950	3,100
LUTZ RUN At the confluence with Mill Run	2.4	600	950	1,200	1,800
Approximately 0.3 mile upstream of the confluence with Lutz Run	2.3	590	935	1,180	1,770
MILL RUN At the confluence with Mill Run Reservoir	12.6	*	*	3,540	*
Upstream of the confluence of unnamed tributary	10.0	*	*	3,160	*
Upstream of the confluence of Fulton Run	4.37	*	*	2,085	*
MILL RUN TO LUTZ RUN At the confluence with Lutz Run	1.5	450	800	900	1,300

* Data Not Available

Table 10 – Summary of Discharges (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ. MILES)	PEAK DISCHARGES (cfs)			
		10%- ANNUAL- CHANCE	2%- ANNUAL- CHANCE	1%- ANNUAL- CHANCE	0.2%- ANNUAL- CHANCE
MOUNTS CREEK (Continued)					
Upstream of the confluence of Spruce Run	8.3	*	*	2,450	*
At the confluence with Georges Creek	6.06	*	*	2,170	*
NORTH BRANCH BROWNS RUN					
At the confluence with Browns Run	9.10	*	*	2,460	*
Upstream of the confluence of unnamed tributary (at Plummer)	7.34	*	*	2,130	*
Upstream of the confluence of unnamed tributary (upstream of Messamore)	5.7	*	*	1,770	*
Upstream of the confluence of unnamed tributary (upstream of Township Route bridge)	3.6	*	*	1,270	*
POPLAR RUN					
At the confluence with Indian Creek	10.2	*	*	2,970	*
REDSTONE CREEK					
Approximately 200 feet upstream of State Route 4026 bridge	104.7	5,450	8,150	9,450	12,800
At the downstream corporate limits of Township of Franklin	89.6	*	*	8,870	*
Upstream of the confluence of Shear Hollow	88.5	*	*	8,400	*
Approximately 315 feet upstream of State Route 4026 bridge	82.8	*	*	8,400	*

* Data Not Available

Table 10 – Summary of Discharges (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ. MILES)	PEAK DISCHARGES (cfs)			
		10%- ANNUAL- CHANCE	2%- ANNUAL- CHANCE	1%- ANNUAL- CHANCE	0.2%- ANNUAL- CHANCE
REDSTONE CREEK (Continued)					
Upstream of the confluence of Bolden Run	78.5	*	*	8,080	*
Upstream of the confluence of Jennings Run	58.6	*	*	6,530	*
Approximately 0.73 miles downstream of State Route 4010 bridge	57.2	*	*	6,530	*
At U.S. Route 119	37.0	3,080	5,120	6,170	9,150
Upstream of the confluence with Cove Run	24.1	3,120	4,960	6,020	8,750
Approximately 1,400 feet downstream from confluence with Coal Lick Run	23.8	2,970	4,750	5,770	8,400
Downstream of East Fayette Street	17.2	1,670	2,840	3,440	5,170
Upstream of Barton Mill Road	16.0	1,580	2,680	3,260	4,890
Downstream of Township Drive	13.2	1,350	2,310	2,810	4,220
At Redstone Furnace Road	7.1	820	1,430	1,740	2,650
Upstream of Brownfield Lane	5.1	630	1,100	1,350	2,060
Downstream from Stadium Drive	3.5	470	830	1,020	1,560
SALTICK RUN					
At the confluence with Dunlap Creek	4.5	700	1,150	1,350	2,000
SOUTH BRANCH BROWNS RUN					
At the confluence with Browns Run	4.49	*	*	1,500	*

* Data Not Available

Table 10 – Summary of Discharges (Continued)

FLOODING SOURCE AND LOCATION	DRAINAGE AREA (SQ. MILES)	PEAK DISCHARGES (cfs)			
		10%- ANNUAL- CHANCE	2%- ANNUAL- CHANCE	1%- ANNUAL- CHANCE	0.2%- ANNUAL- CHANCE
STAUFFER RUN					
At the confluence with Jacobs Creek	4.8	1,100	1,800	2,110	2,880
TRIBUTARY A TO LITTLE REDSTONE CREEK					
At the confluence with Little Redstone Creek	6.0	850	1,600	2,050	3,450
TRUMP RUN					
Upstream side of the Baltimore and Ohio Railroad culvert	2.58	560	980	1,180	1,770
Downstream side of the first footbridge	2.28	510	890	1,070	1,600
WASHINGTON RUN					
Approximately 1,660 feet downstream of Stranton Road	7.1	950	1,650	2,050	3,250
At the confluence of an unnamed tributary	6.3	865	1,500	1,865	2,960
At the confluence of Washington Run Tributary B	3.6	800	1,250	1,500	2,200
Approximately 230 feet downstream of access road	3.5	555	960	1,195	1,895
At the confluence of Washington Run Tributary A	1.3	390	620	745	1,070
WASHINGTON RUN TRIBUTARY A					
At the confluence with Washington Run	1.4	450	700	850	1,300
WASHINGTON RUN TRIBUTARY B					
At the confluence with Washington Run	2.5	650	1,000	1,200	1,650

*Data not available

Lick Run Split Flow

Lick Run forms a split flow situation just upstream of the railroad bridge at station 1,624. At this location the flow splits with a portion of the flow continuing through the railroad bridge along the main channel and a portion flowing northward along the low area between two railroad embankments then eventually flowing into the Redstone Creek near station 19,650 of Redstone Creek. LiDAR data was used as the source of cross section information for the Lick Run Split Flow cross section geometry. The HEC-RAS junction flow optimization function was utilized to estimate balanced flow in both the channels. In order to ensure a representative flow division between two channels and a realistic water surface elevation upstream of the railroad bridge, a cross section was placed at a section with controlling elevation across the split flow channel. HEC-RAS results were evaluated to ensure the flow balance across the junction.

For flooding sources studied with approximate methods, the 1-percent-annual-chance flood elevations were determined using USGS Regression Equations (Reference 73) and the USACE HEC-RAS computer program (Reference 88). The peak flood discharges from the regression equations were input into a HEC-RAS model that included cross sections extracted from PAMAP LiDAR data collected in 2006 (Reference 35). Because this cross section information was not supplemented with field survey data and the models did not include bridge and culvert information, the resulting floodplain boundaries are considered approximate. Approximately 236 stream miles in Fayette County were analyzed using this approach.

Table 11, “Manning’s “n” Values”, shows the channel and overbank “n” values for the streams studied by detailed methods.

Table 11 - Manning’s “n” Values

Stream	Channel	Overbank
Back Creek	0.045	0.080
Bennington Spring Run	0.045-0.050	0.016-0.080
Bennington Spring Run Split Flow	0.030-0.050	0.030-0.050
Breakneck Run	0.045	0.080
Browns Run	0.040	0.080
Bute Run	0.035-0.040	0.065-0.085
Cheat River	0.030	0.100
Coal Lick Run	0.030-0.040	0.016-0.100
Connell Run	0.045-0.050	0.070
Cove Run	0.035-0.045	0.040-0.080
Downers Run	0.033-0.040	0.040-0.080
Dunbar Run	0.028	0.080
Dunlap Run	0.030-0.055	0.045-0.100
Galley Run	0.040	0.060
Georges Creek	0.040	0.060-0.080
Indian Creek	0.045	0.080
Irish Run	0.013-0.040	0.080
Jacobs Creek	0.025-0.036	0.110
Jennings Run	0.035-0.040	0.065-0.090

Table 11 - Manning's "n" Values (Continued)

Stream	Channel	Overbank
Lick Run	0.016-0.050	0.016-0.110
Lick Run Overflow	0.045-0.080	0.016-0.120
Lick Run Split Flow	0.030-0.050	0.016-0.085
Little Redstone Creek	0.028-0.037	0.040-0.080
Lutz Run	0.025-0.038	0.040-0.080
Mill Run	0.035-0.045	0.080
Mill Run to Lutz Run	0.020-0.045	0.038-0.080
Monongahela River	0.019-0.034	0.055-0.060
Mountain Creek	0.040	0.060-0.080
Mounts Creek	0.032-0.040	0.070-0.080
Muddy Run	0.040	0.060-0.080
North Branch Browns Run	0.040	0.080
Popular Run	0.047	0.090
Redstone Creek	0.025-0.045	0.016-0.100
Saltlick Run	0.032-0.042	0.055-0.090
South Branch Browns Run	0.040	0.080
Stauffer Run	0.025-0.033	0.110
Tributary A to Little Redstone Creek	0.035-0.037	0.050-0.080
Trump Run	0.040-0.050	0.070
Washington Run	0.028-0.042	0.045-0.080
Washington Run Tributary A	0.028-0.037	0.045-0.080
Washington Run Tributary B	0.032-0.042	0.045-0.075
Youghiogheny River	0.021-0.042	0.060-0.150

All qualifying bench marks within a given jurisdiction that are cataloged by the National Geodetic Survey (NGS) and entered into the National Spatial Reference System (NSRS) as First or Second Order Vertical and have a vertical stability classification of A, B, or C are shown and labeled on the FIRM with their 6-character NSRS Permanent Identifier.

Bench marks cataloged by the NGS and entered into the NSRS vary widely in vertical stability classification. NSRS vertical stability classifications are as follows:

- Stability A: Monuments of the most reliable nature, expected to hold position/elevation well (e.g., mounted in bedrock)
- Stability B: Monuments which generally hold their position/elevation well (e.g., concrete bridge abutment)
- Stability C: Monuments which may be affected by surface ground movements (e.g., concrete monument below frost line)
- Stability D: Mark of questionable or unknown vertical stability (e.g., concrete monument above frost line, or steel witness post)

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BENNINGTON SPRING RUN								
A	203	113	203	5.2	1,040.3	1,040.3	1,040.4	0.1
B	256	618	1,474	0.3	1,044.9	1,044.9	1,045.7	0.8
C	579	102	290	1.7	1,044.9	1,044.9	1,045.7	0.8
D	1,557	130	168	2.9	1,057.3	1,057.3	1,057.9	0.6
E	2,064	30	121	3.8	1,067.6	1,067.6	1,067.9	0.3
F	2,290	88	122	5.3	1,068.4	1,068.4	1,069.3	0.9
G	2,705	108	151	4.3	1,073.2	1,073.2	1,074.1	0.9
H	3,001	83	205	3.2	1,082.7	1,082.7	1,083.6	0.9
I	3,046	63	196	3.3	1,083.7	1,083.7	1,084.6	0.9
J	3,228	41	82	7.9	1,084.8	1,084.8	1,085.7	0.9
K	3,458	39	81	8.0	1,089.9	1,089.9	1,090.0	0.1
L	3,670	177	164	3.8	1,093.6	1,093.6	1,094.3	0.7
M	3,748	92	251	2.5	1,097.1	1,097.1	1,098.0	0.9
N	3,872	23	64	9.6	1,097.9	1,097.9	1,097.9	0.0

¹ Feet above confluence with Lick Run

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

FLOODWAY DATA

BENNINGTON SPRING RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
BENNINGTON SPRING RUN SPLIT FLOW								
A	774	54	39	4.9	1,048.2	1,048.2	1,048.3	0.1
B	1,142	28	31	6.1	1,051.1	1,051.1	1,051.3	0.2
C	1,583	61	40	4.7	1,056.8	1,056.8	1,056.8	0.0
D	1,906	42	44	4.3	1,060.7	1,060.7	1,060.8	0.1
E	2,082	33	33	5.7	1,065.8	1,065.8	1,065.9	0.1
F	2,214	48	120	3.1	1,067.7	1,067.7	1,068.0	0.3

¹ Feet above confluence with Bennington Spring Run

TABLE 13	FEDERAL EMERGENCY MANAGEMENT AGENCY FAYETTE COUNTY, PA (ALL JURISDICTIONS)	FLOODWAY DATA
		BENNINGTON SPRING RUN SPLIT FLOW

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
CHEAT RIVER								
A	264 ¹	516	17,542	8.1	807.0	807.0	808.0	1.0
B	2,587 ¹	813	27,127	5.3	808.5	808.5	809.5	1.0
C-L*								
COAL LICK RUN								
A	88 ²	34	302	7.1	968.1	967.4 ³	967.4	0.0
B	233 ²	78	376	5.7	968.1	968.0 ³	968.1	0.1
C	453 ²	28	253	8.5	968.4	968.4	968.5	0.1
D	552 ²	120	480	4.5	971.1	971.1	971.3	0.2
E	985 ²	50	309	7.0	971.4	971.4	971.7	0.3
F	1,517 ²	20	148	14.5	972.7	972.7	973.0	0.3
G	1,740 ²	155	811	3.3	977.6	977.6	978.4	0.8
H	1,798 ²	32	341	6.3	977.5	977.5	978.4	0.9
I	2,027 ²	150	816	2.5	979.4	979.4	979.8	0.4
J	2,219 ²	213	1,117	1.7	979.4	979.4	979.9	0.5
K	2,641 ²	172	650	2.8	979.5	979.5	980.1	0.6
L	3,188 ²	127	460	4.0	980.2	980.2	981.1	0.9
M	3,492	33	220	8.4	981.5	981.5	982.1	0.6

¹ Feet above confluence with Monongahela River

² Feet above confluence with Redstone Creek

³ Elevation computed without consideration of backwater effects from Redstone Creek

TABLE 13	FEDERAL EMERGENCY MANAGEMENT AGENCY FAYETTE COUNTY, PA (ALL JURISDICTIONS)	FLOODWAY DATA
		CHEAT RIVER – COAL LICK RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
COAL LICK RUN (Continued)								
N	4,019	47	269	6.4	984.7	984.7	985.1	0.4
O	4,344	35	177	9.7	985.4	985.4	985.9	0.5
P	4,584	139	739	2.3	988.2	988.2	989.0	0.8
Q	5,308	63	360	4.8	990.2	990.2	990.5	0.3
R	5,864	85	379	4.5	991.1	991.1	991.6	0.5
S	6,060	114	348	5.4	992.2	992.2	992.8	0.6
T	6,470	79	500	3.4	994.2	994.2	994.9	0.7
U	6,990	80	269	4.3	994.5	994.5	995.1	0.6
V	7,517	90	468	2.5	995.0	995.0	996.0	1.0
W	7,814	88	323	3.6	995.2	995.2	996.1	0.9
X	8,096	43	231	5.0	996.1	996.1	996.7	0.6
Y	8,263	39	161	7.2	996.9	996.9	997.6	0.7
Z-BH*								

¹ Feet above confluence with Redstone Creek

* No floodway data computed

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

FLOODWAY DATA

COAL LICK RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
LICK RUN								
A	431	55	173	5.2	1,024.4	1,021.8 ⁴	1,022.4	0.6
B	1,097	137	224	4.0	1,027.5	1,027.5	1,027.9	0.4
C	1,417	80	140	6.4	1,032.4	1,032.4	1,032.7	0.3
D	1,602	32	135	6.7	1,033.7	1,033.7	1,033.8	0.1
E	1,789	88	241	6.4	1,036.6	1,036.6	1,036.9	0.3
F	2,142	151 ²	299	3.7	1,039.1	1,039.1	1,040.0	0.9
G	2,425	98 ³	182	6.5	1,040.6	1,040.6	1,041.5	0.9
H	2,458	100 ³	200	5.7	1,042.5	1,042.5	1,043.0	0.5
I	2,756	83 ³	173	6.4	1,043.9	1,043.9	1,044.9	1.0
J	3,491	199 ³	422	2.6	1,049.8	1,049.8	1,050.5	0.7
K	3,739	73	144	7.7	1,053.6	1,053.6	1,054.5	0.9
L	3,786	148	624	3.1	1,057.0	1,057.0	1,058.0	1.0
M	4,078	67	172	6.5	1,058.0	1,058.0	1,058.6	0.6
N	4,556	34	109	10.0	1,066.3	1,066.3	1,066.5	0.2
O	5,240	96	158	6.9	1,078.4	1,078.4	1,078.4	0.0
P	5,573	114	177	6.2	1,084.5	1,084.5	1,084.5	0.0
Q	5,630	185	323	3.4	1,086.7	1,086.7	1,087.5	0.8
R	5,916	117	177	6.1	1,093.3	1,093.3	1,093.7	0.4
S	6,032	42	114	9.6	1,097.6	1,097.6	1,097.6	0.0

¹ Feet above confluence with Redstone Creek

⁴ Elevation computed without consideration of backwater effects from Redstone Creek

² Combined floodway width with Bennington Spring Run

³ Floodway width does not take island into consideration

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

FLOODWAY DATA

LICK RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
LICK RUN (Continued)								
T	6,140	123	164	6.6	1,101.2	1,101.2	1,101.2	0.0
U	6,377	93	176	6.2	1,105.2	1,105.2	1,105.8	0.6
V	6,488	108	176	6.2	1,108.1	1,108.1	1,108.1	0.0
W	6,609	120	320	3.4	1,110.2	1,110.2	1,110.2	0.0
X	6,869	70	144	7.6	1,115.6	1,115.6	1,115.6	0.0
Y	7,285	40	112	9.5	1,125.4	1,125.4	1,125.4	0.0
Z	7,665	108	169	6.3	1,135.9	1,135.9	1,135.9	0.0
AA	7,796	22	93	11.5	1,137.6	1,137.6	1,137.6	0.0
AB	7,992	48	121	8.8	1,143.9	1,143.9	1,143.9	0.0
AC	8,169	103	157	6.8	1,148.4	1,148.4	1,148.4	0.0
AD	8,295	19	88	12.2	1,151.7	1,151.7	1,151.7	0.0
AE	8,343	72	379	2.9	1,156.3	1,156.3	1,157.2	0.9
AF	8,515	20	89	12.0	1,157.0	1,157.0	1,157.1	0.1

¹ Feet above confluence with Redstone Creek

TABLE 13	FEDERAL EMERGENCY MANAGEMENT AGENCY FAYETTE COUNTY, PA (ALL JURISDICTIONS)	FLOODWAY DATA
		LICK RUN

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
LICK RUN SPLIT FLOW								
A	100 ¹	38	84	7.7	1,025.5	1,025.5	1,026.5	1.0
B	390 ¹	53	110	5.9	1,028.6	1,028.6	1,028.7	0.1
C	604 ¹	47	84	7.7	1,031.6	1,031.6	1,031.7	0.1
D	957 ¹	59	107	6.0	1,035.9	1,035.9	1,035.9	0.0
E	1,201 ¹	104	665	1.0	1,036.2	1,036.2	1,036.7	0.5
LITTLE REDSTONE CREEK								
A	115 ²	112	931	3.3	766.1	750.5 ³	751.3	0.8
B	1,435 ²	73	391	7.9	766.1	752.8 ³	753.2	0.4
C	2,535 ²	87	421	7.4	766.1	758.4 ³	758.4	0.0
D	3,610 ²	48	303	10.2	766.1	764.3 ³	765.0	0.7
E	4,653 ²	34	365	5.3	775.7	775.7	775.8	0.1
F	5,593 ²	40	189	10.3	778.5	778.5	778.8	0.3
G	6,663 ²	30	217	9.0	785.9	785.9	786.7	0.8

¹ Feet above confluence with Redstone Creek

² Feet above confluence with Monongahela River

³ Elevation computed without consideration of backwater effects from Monongahela River

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

FLOODWAY DATA

**LICK RUN SPLIT FLOW –
LITTLE REDSTONE CREEK**

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
REDSTONE CREEK								
A	10,437	117	1,177	8.0	773.0	769.1 ²	769.8	0.7
B	11,130	105	1,014	9.3	773.0	770.6 ²	771.5	0.9
C	12,006	110	1,001	9.4	773.2	773.2	774.1	0.9
D	13,856	106	946	10.0	779.0	779.0	779.6	0.6
E	15,066	132	1,495	6.3	783.4	783.4	784.1	0.7
F	17,316	106	674	14.0	788.8	788.8	789.1	0.3
G-AS*								
AT	146,047	59	698	8.8	952.5	952.5	952.9	0.4
AU	146,733	102	1,180	5.2	955.1	955.1	955.5	0.4
AV	147,384	181	1,264	4.9	957.1	957.1	957.5	0.4
AW	148,099	198	1,847	3.3	958.3	958.3	959.2	0.9
AX	148,849	299	1,965	3.1	958.6	958.6	959.5	0.9
AY	149,792	278	1,531	3.9	961.5	961.5	962.2	0.7
AZ	150,758	210	815	7.1	963.3	963.3	963.7	0.4
BA	151,821	306	1,873	3.8	965.2	965.2	965.5	0.3
BB	152,218	412	1,303	4.5	966.5	966.5	967.0	0.5
BC	153,055	174	903	3.9	968.7	968.7	969.7	1.0
BD	146,047	75	703	6.1	970.7	970.7	971.7	1.0

¹ Feet above confluence with Monongahela River

² Elevation computed without consideration of backwater effects from Monongahela River

* No floodway data computed

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

FLOODWAY DATA

REDSTONE CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE ¹	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
REDSTONE CREEK (Continued)								
BE	153,860	187	797	4.4	972.1	972.1	972.9	0.8
BF	154,764	68	641	5.5	974.0	974.0	974.7	0.7
BG	155,139	50	476	7.4	974.4	974.4	975.1	0.7
BH	155,714	119	731	4.8	977.8	977.8	978.1	0.3
BI	156,629	365	1342	2.6	979.2	979.2	980.0	0.8
BJ	157,022	179	755	7.4	980.5	980.5	981.3	0.8
BK	157,867	45	333	10.3	983.3	983.3	983.5	0.2
BL	158,455	62	424	7.9	986.4	986.4	986.9	0.5
BM	159,207	122	673	5.1	990.9	990.9	991.8	0.9
BN	160,429	330	1,335	2.4	994.6	994.6	995.4	0.8
BO	161,557	267	1,124	2.9	998.1	998.1	998.9	0.8
BP	162,198	227	775	4.2	999.6	999.6	1,000.0	0.4
BQ	163,018	148	391	7.1	1,002.2	1,002.2	1,002.4	0.2
BR	164,049	124	356	7.8	1,006.9	1,006.9	1,007.3	0.4
BS	165,026	415	3,418	1.1	1,018.9	1,018.9	1,019.8	0.9
BT	166,029	198	1,210	2.3	1,019.4	1,019.4	1,020.3	0.9
BU	167,107	34	224	12.5	1,020.5	1,020.5	1,020.6	0.1
BV	167,714	217	977	1.8	1,024.5	1,024.5	1,025.4	0.9
BW	168,650	31	144	12.1	1,025.0	1,025.0	1,025.2	0.2
BX	169,595	51	146	9.3	1,032.2	1,032.2	1,032.6	0.4

¹ Feet above confluence with Monongahela River

TABLE 13	FEDERAL EMERGENCY MANAGEMENT AGENCY FAYETTE COUNTY, PA (ALL JURISDICTIONS)	FLOODWAY DATA
		REDSTONE CREEK

FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)				
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE	
REDSTONE CREEK (Continued)									
BY	170,228	98	203	6.7	1,038.7	1,038.7	1,039.0	0.3	
BZ	170,924	48	146	8.9	1,045.8	1,045.8	1,045.9	0.1	
CA	172,035	98	191	6.8	1,061.3	1,061.3	1,061.8	0.5	
CB	172,822	36	104	9.8	1,075.4	1,075.4	1,075.4	0.0	
SALTICK RUN									
A	50 ²	147	396	3.4	966.3	962.1 ³	963.0	0.9	
B	994 ²	63	299	4.5	966.3	964.8 ³	965.4	0.6	
C	2,479 ²	138	388	3.5	972.0	972.0	972.9	0.9	
D	4,317 ²	123	381	3.5	978.7	978.7	979.6	0.9	

¹ Feet above confluence with Monongahela River

² Feet above confluence with Dunlap Creek

³ Elevation computed without consideration of backwater effects from Dunlap Creek

TABLE 13

FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

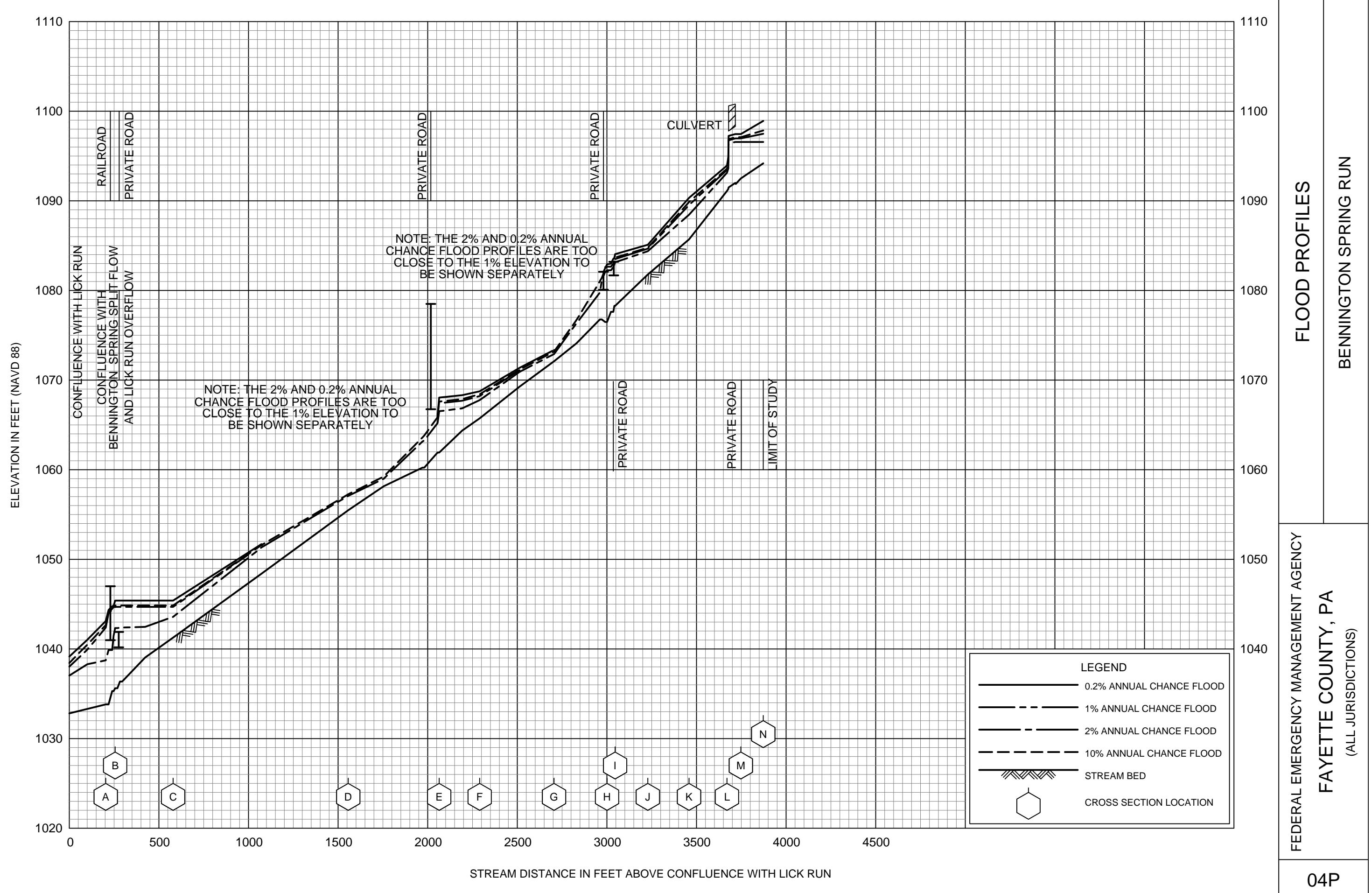
FLOODWAY DATA

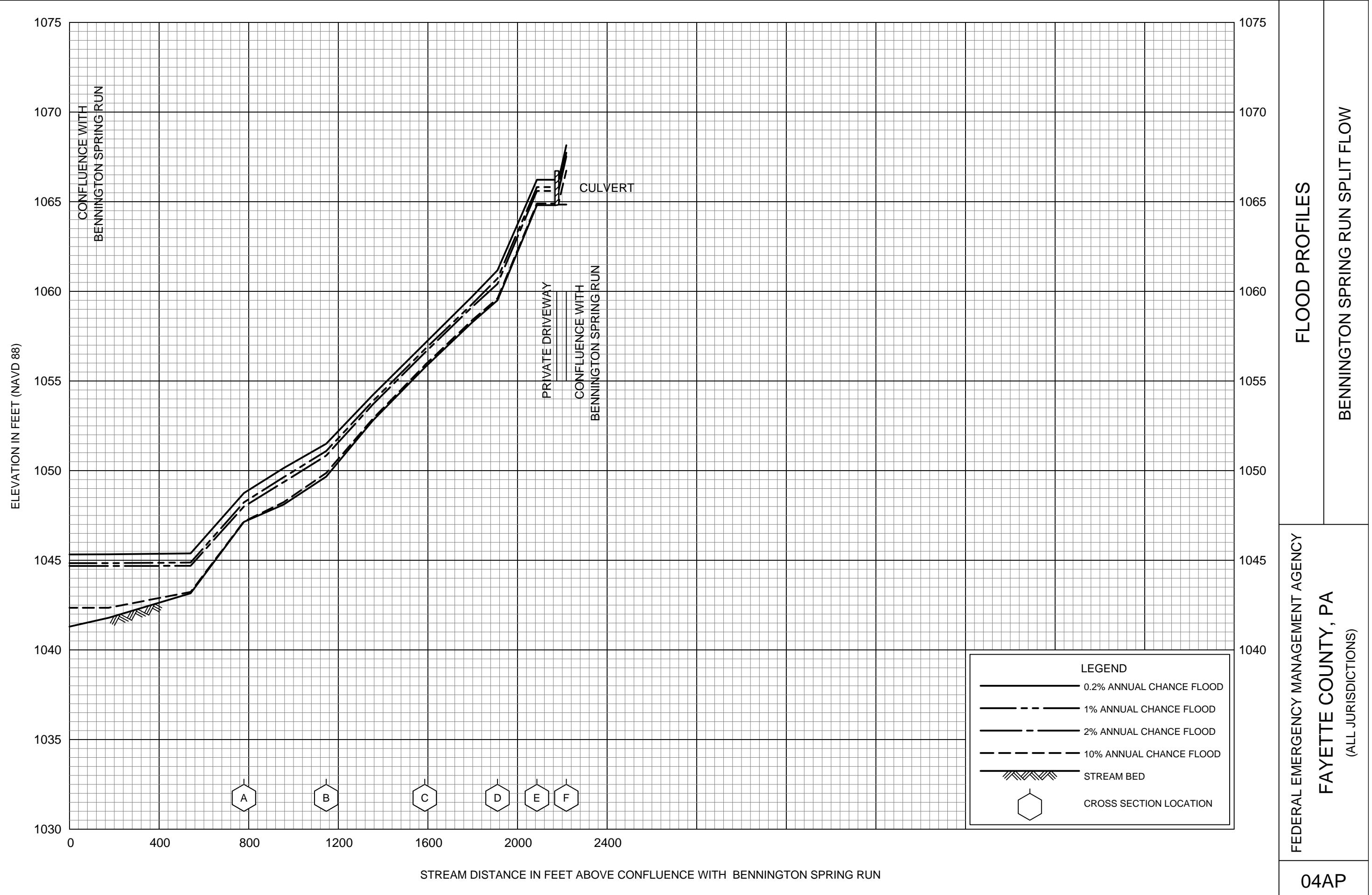
REDSTONE CREEK – SALTICK RUN

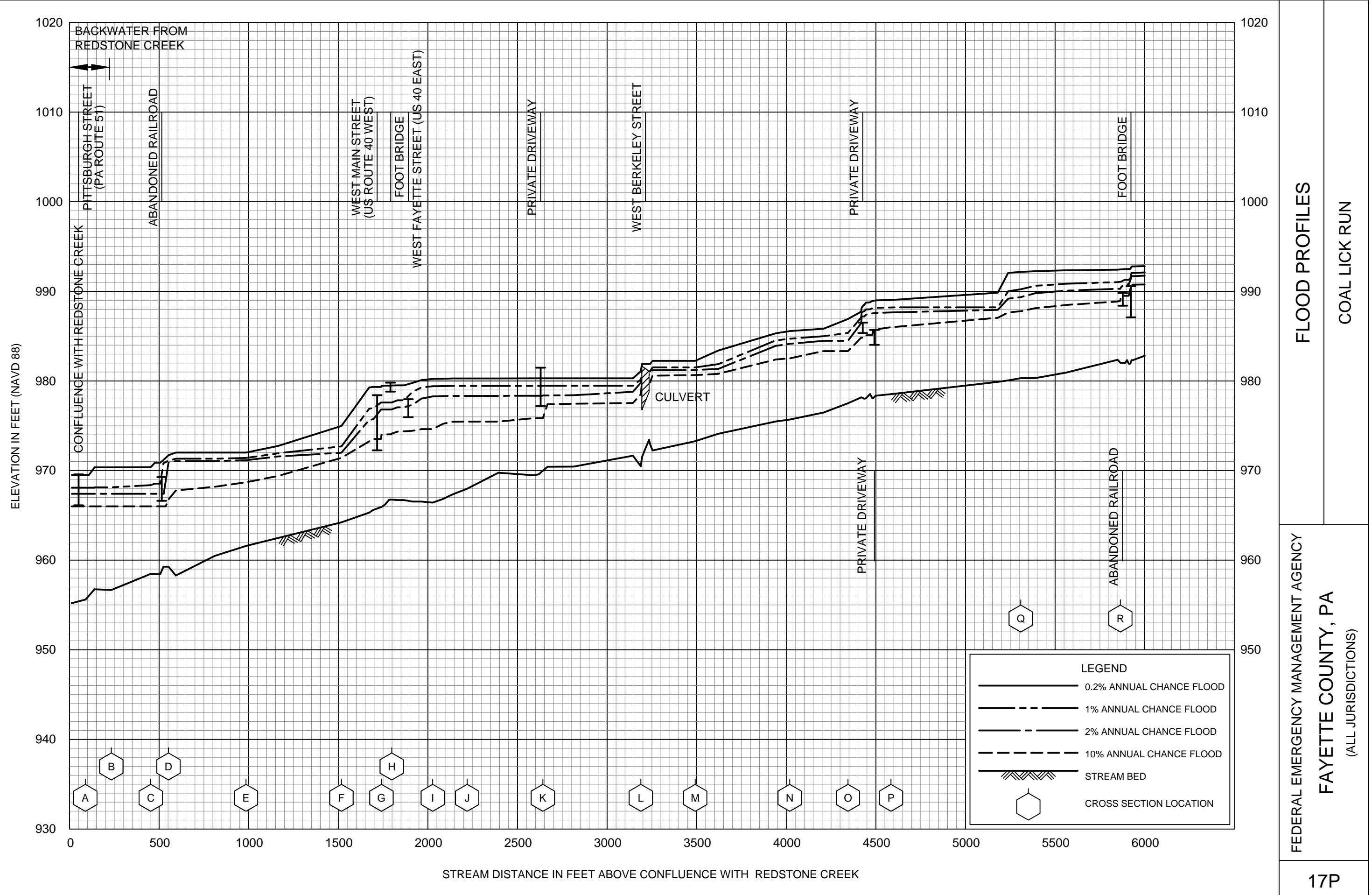
FLOODING SOURCE		FLOODWAY			1-PERCENT-ANNUAL-CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE	WIDTH (FEET)	SECTION AREA (SQUARE FEET)	MEAN VELOCITY (FEET PER SECOND)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
WASHINGTON RUN								
A	290	32	182	11.2	866.8	866.8	867.6	0.8
B	1,580	31	159	12.9	910.8	910.8	910.8	0.0
C	2,055	100	303	6.8	921.9	921.9	921.9	0.0
D	2,851	100	321	6.4	932.6	932.6	932.7	0.1
E	4,235	137	637	3.2	946.5	946.5	947.4	0.9
F	5,305	84	396	4.7	947.5	947.5	948.4	0.9
G	6,123	150	961	1.9	955.9	955.9	956.3	0.4
H	7,733	100	268	5.6	959.4	959.4	959.4	0.0
I	8,365	100	353	4.2	964.1	964.1	964.1	0.0
J	8,845	90	484	3.1	964.2	964.2	964.8	0.6
K	10,365	60	232	6.5	970.2	970.2	970.9	0.7
L	11,452	40	238	6.3	981.0	981.0	981.1	0.1
M	12,607	35	171	4.4	986.6	985.5	985.6	0.1
N	14,962	16	79	9.4	998.2	998.2	999.2	1.0

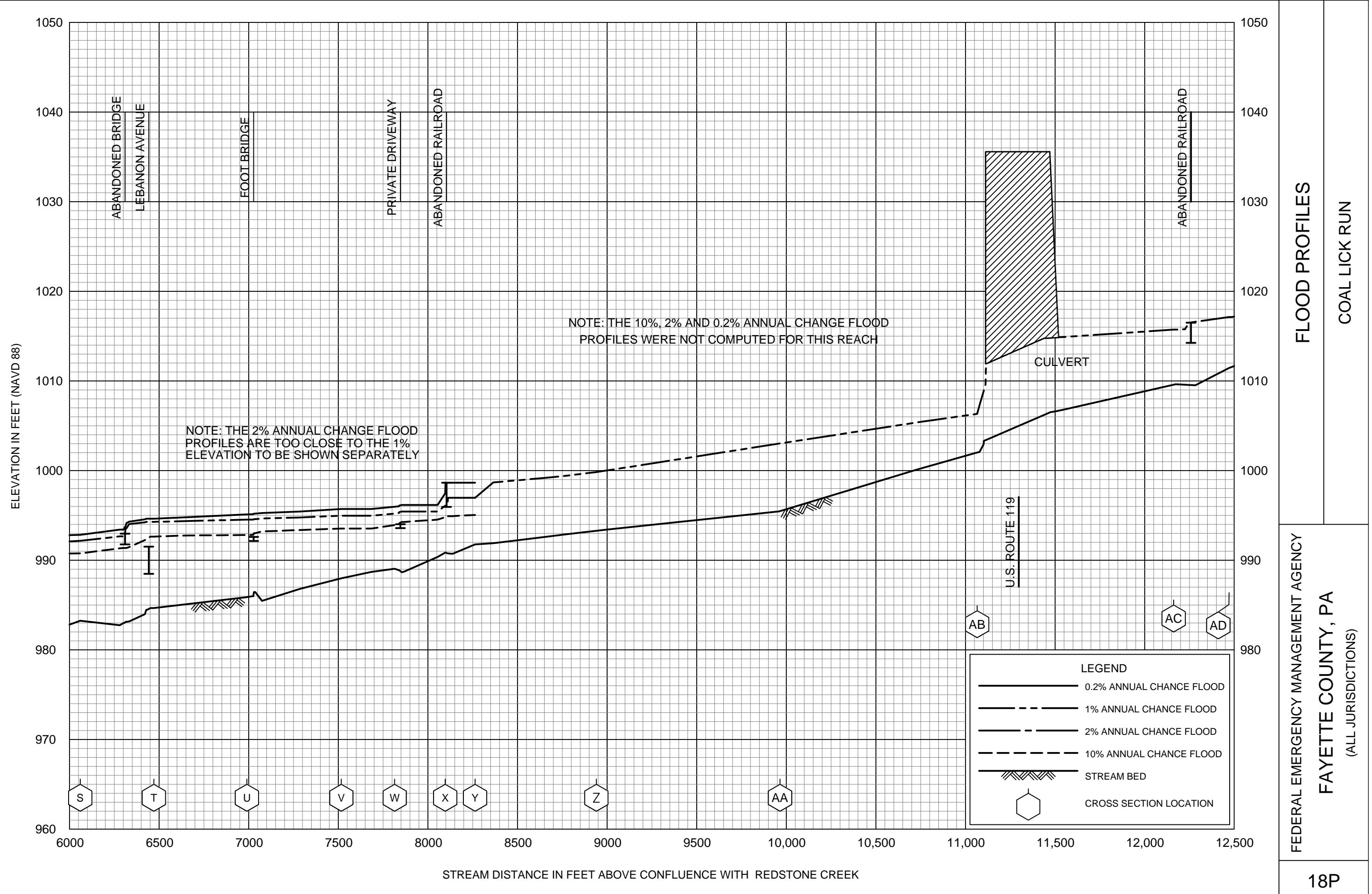
¹ Feet above Borough of Perryopolis corporate limits

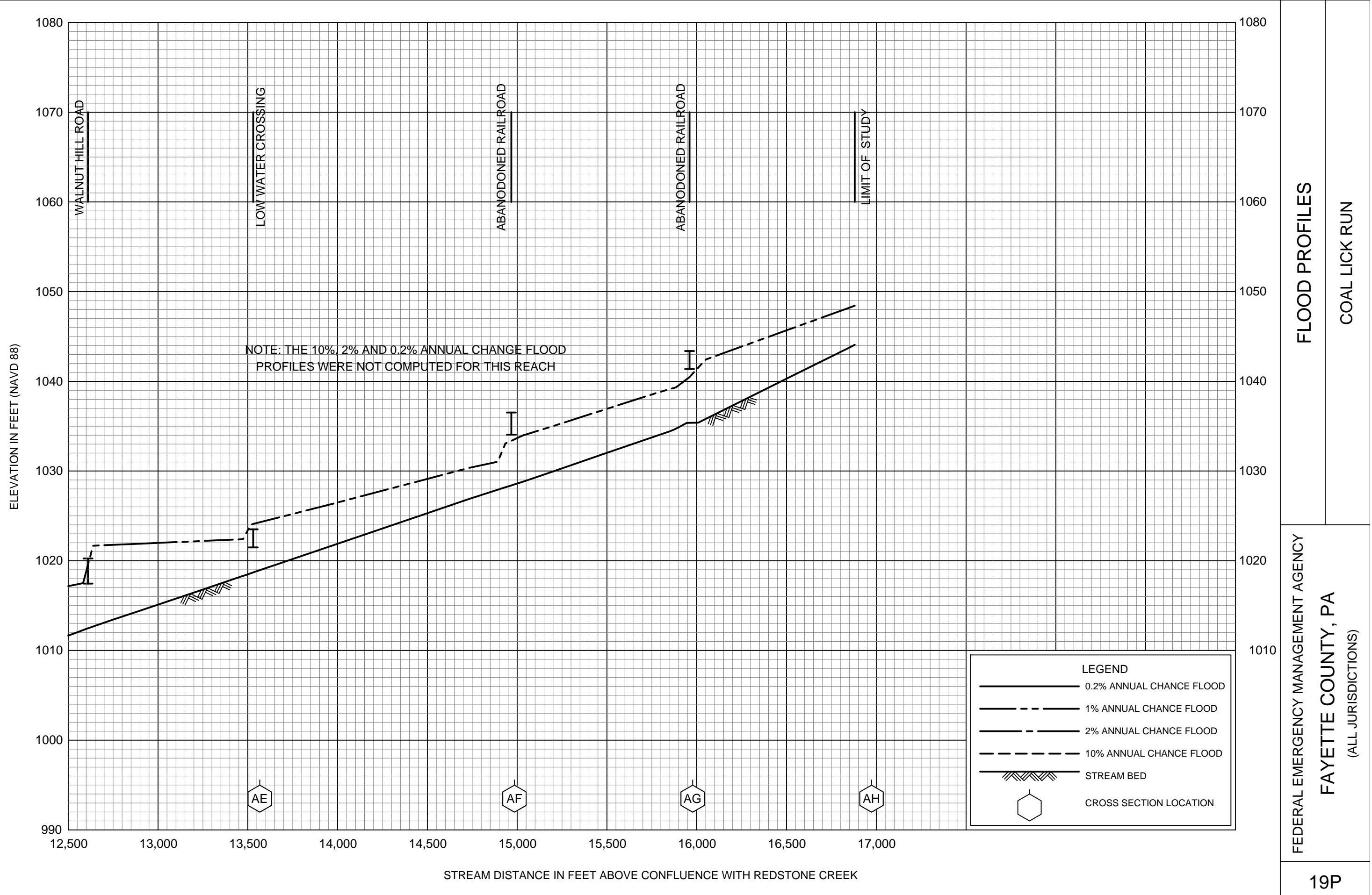
TABLE 13	FEDERAL EMERGENCY MANAGEMENT AGENCY FAYETTE COUNTY, PA (ALL JURISDICTIONS)	FLOODWAY DATA
		WASHINGTON RUN

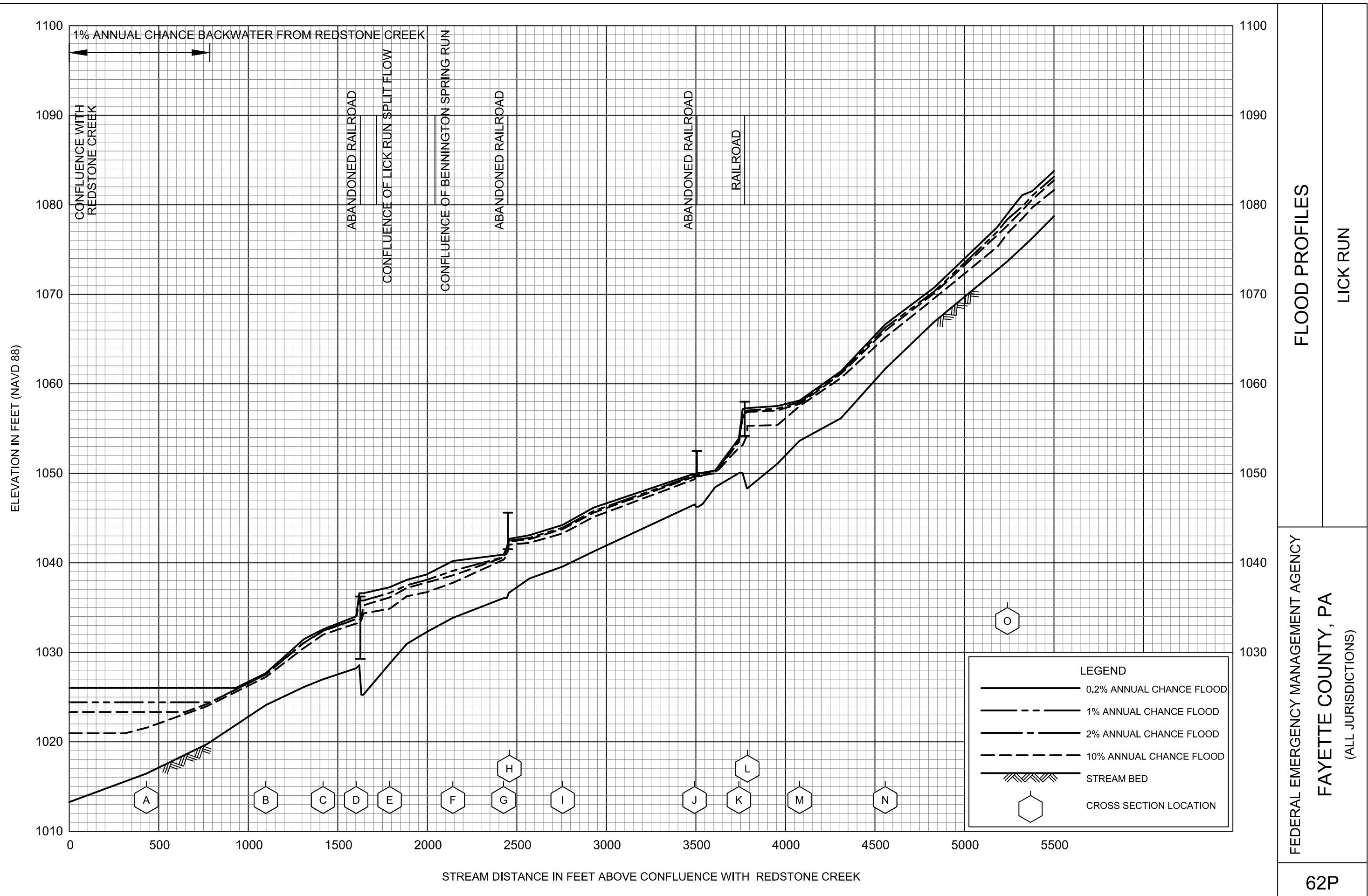




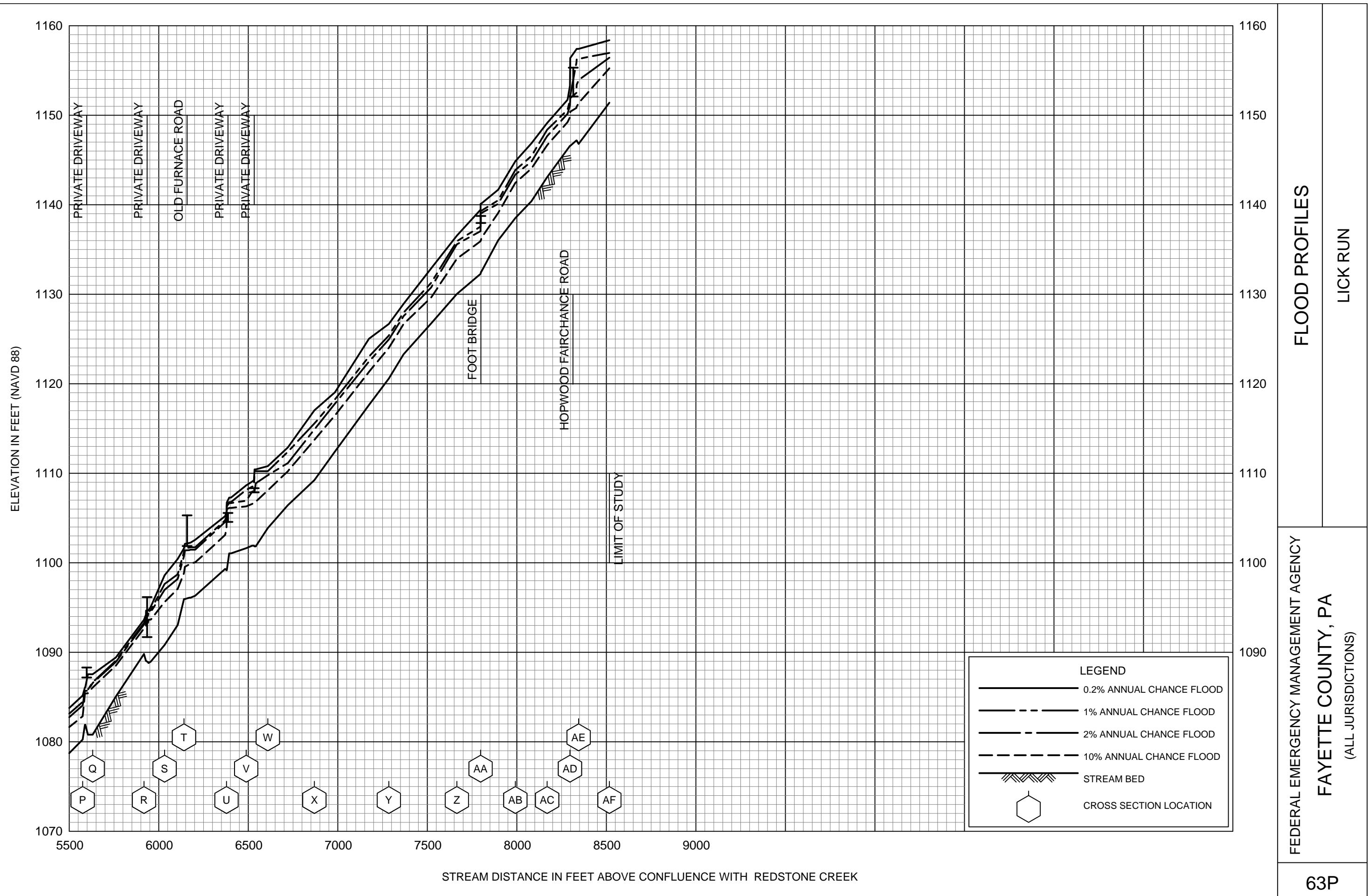


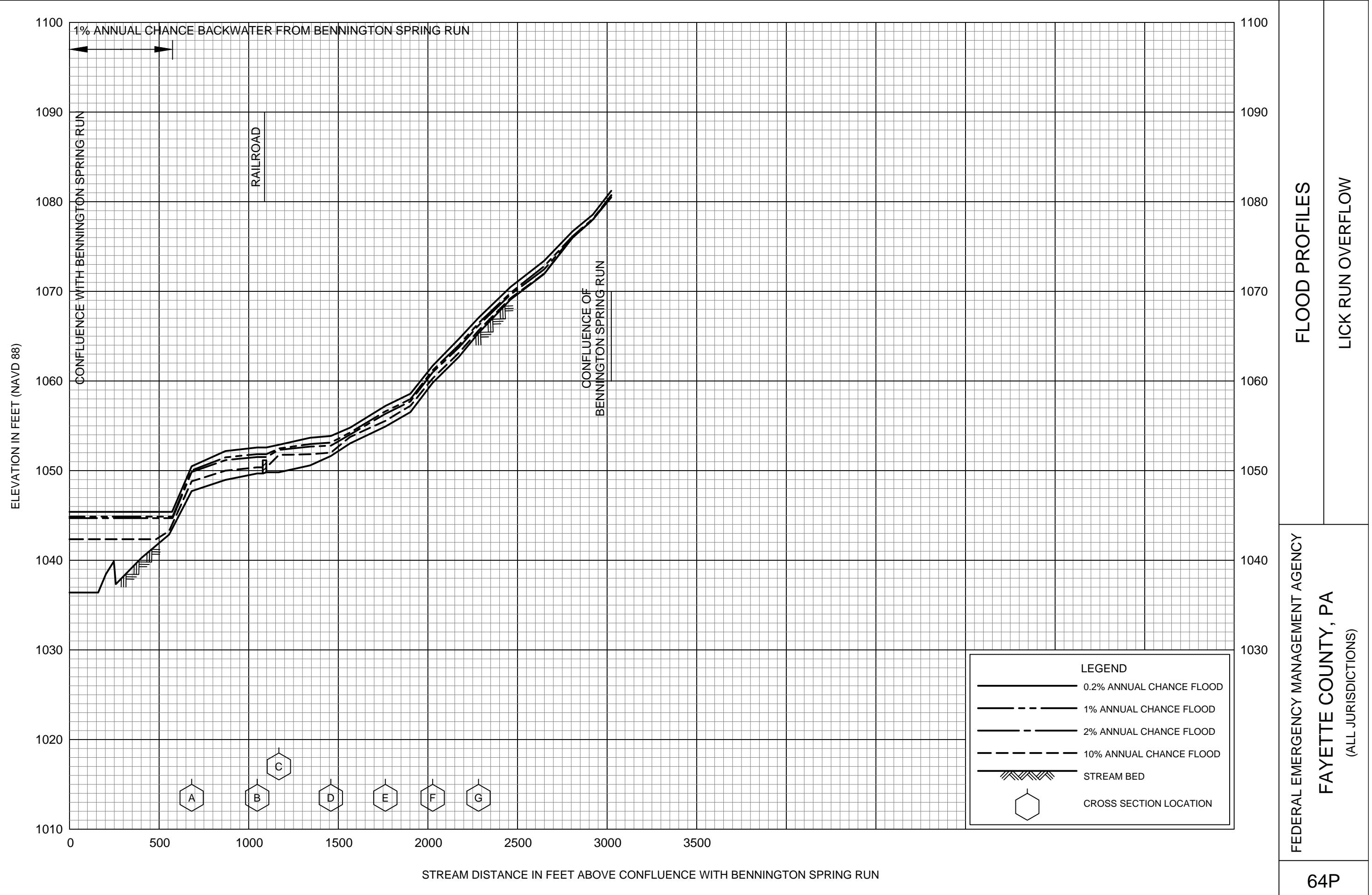


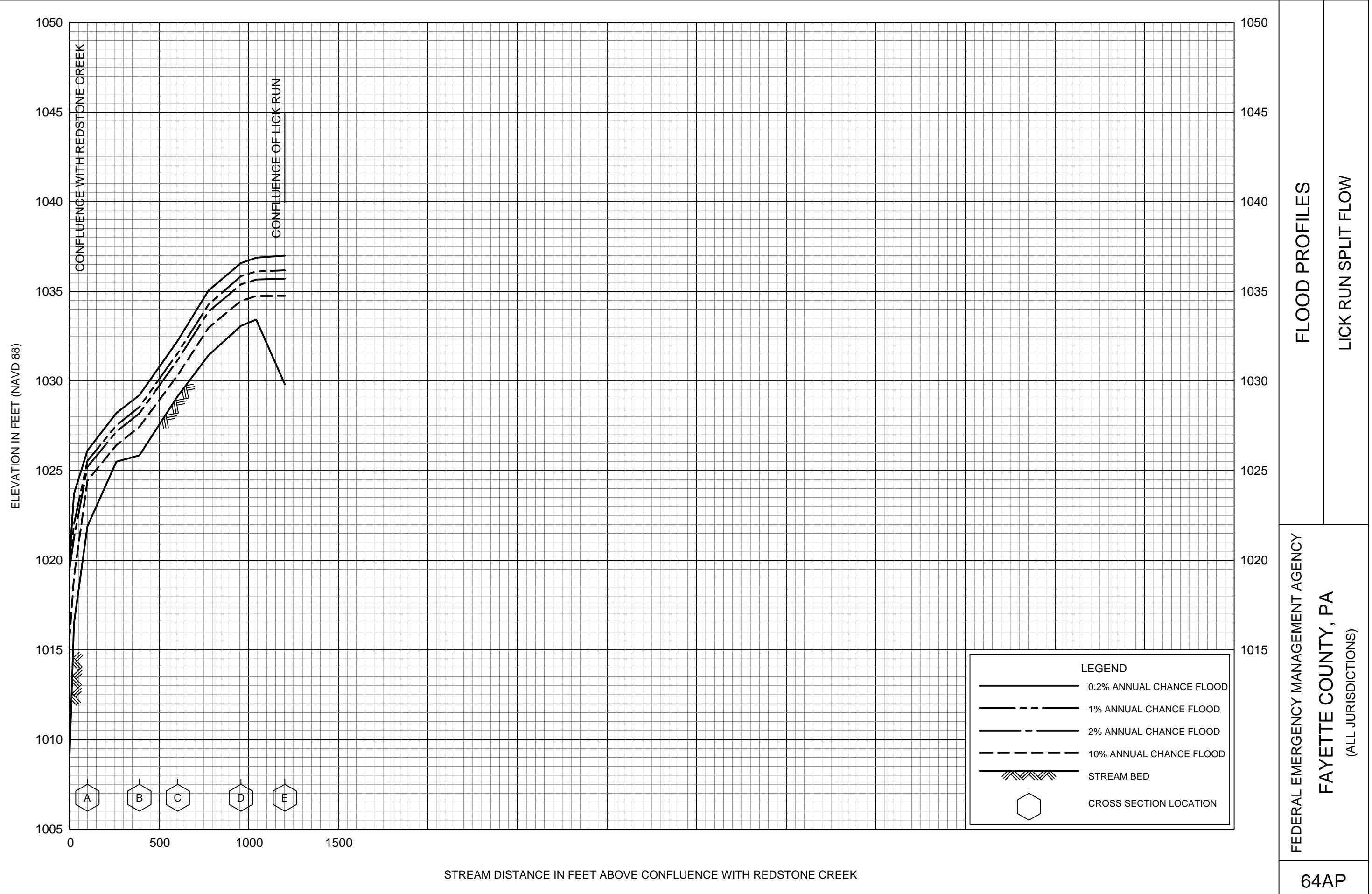


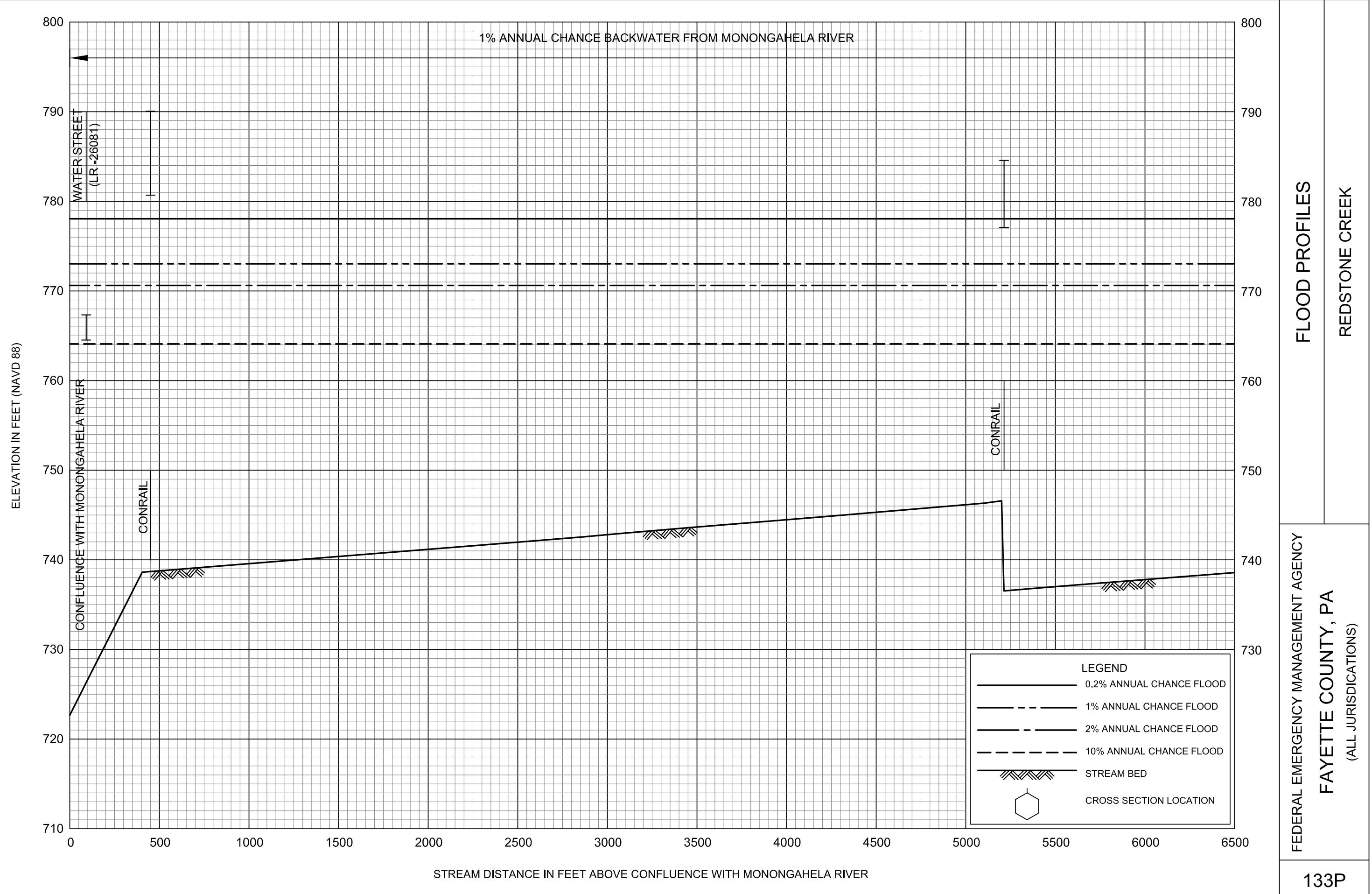


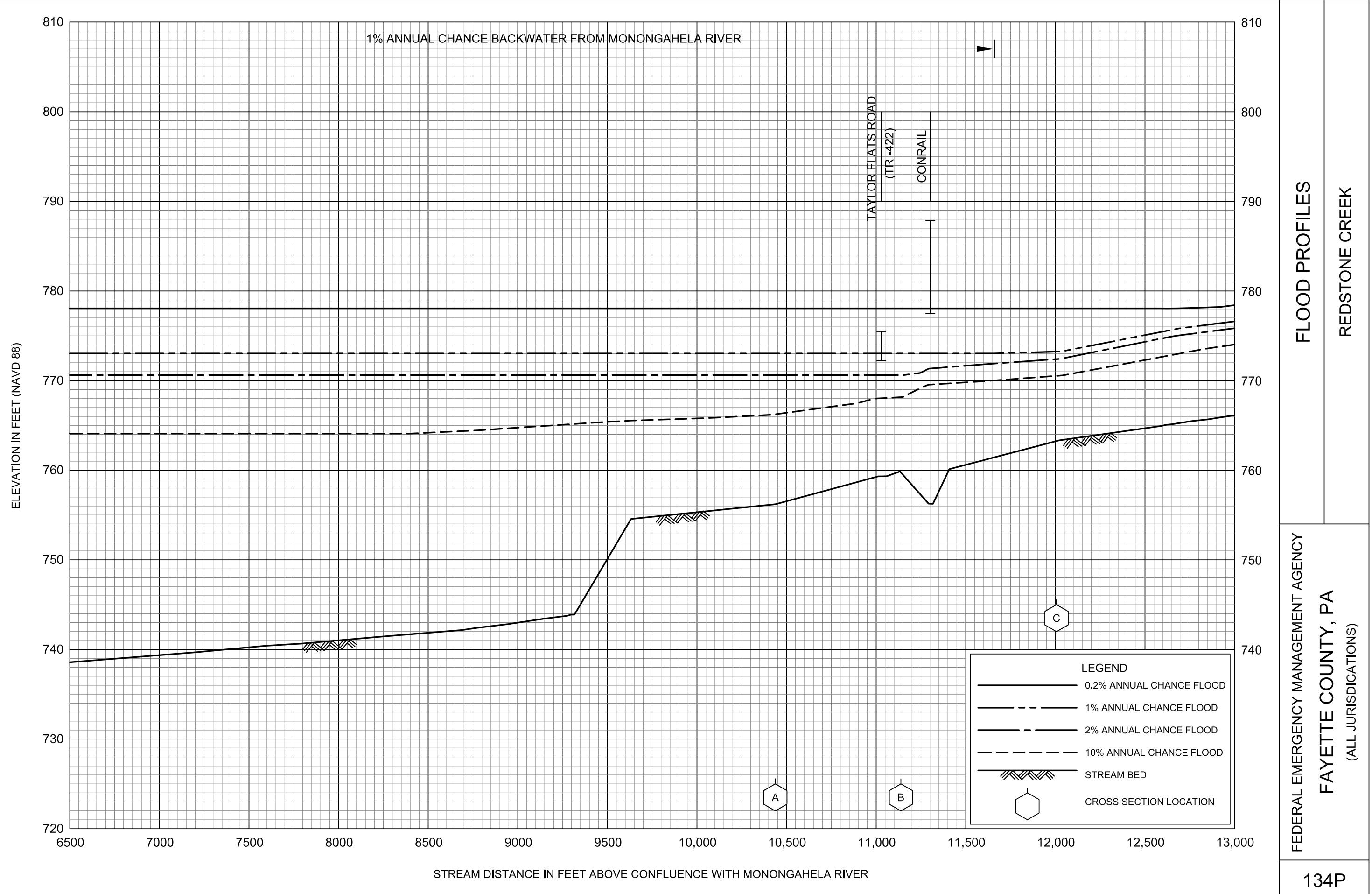
FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

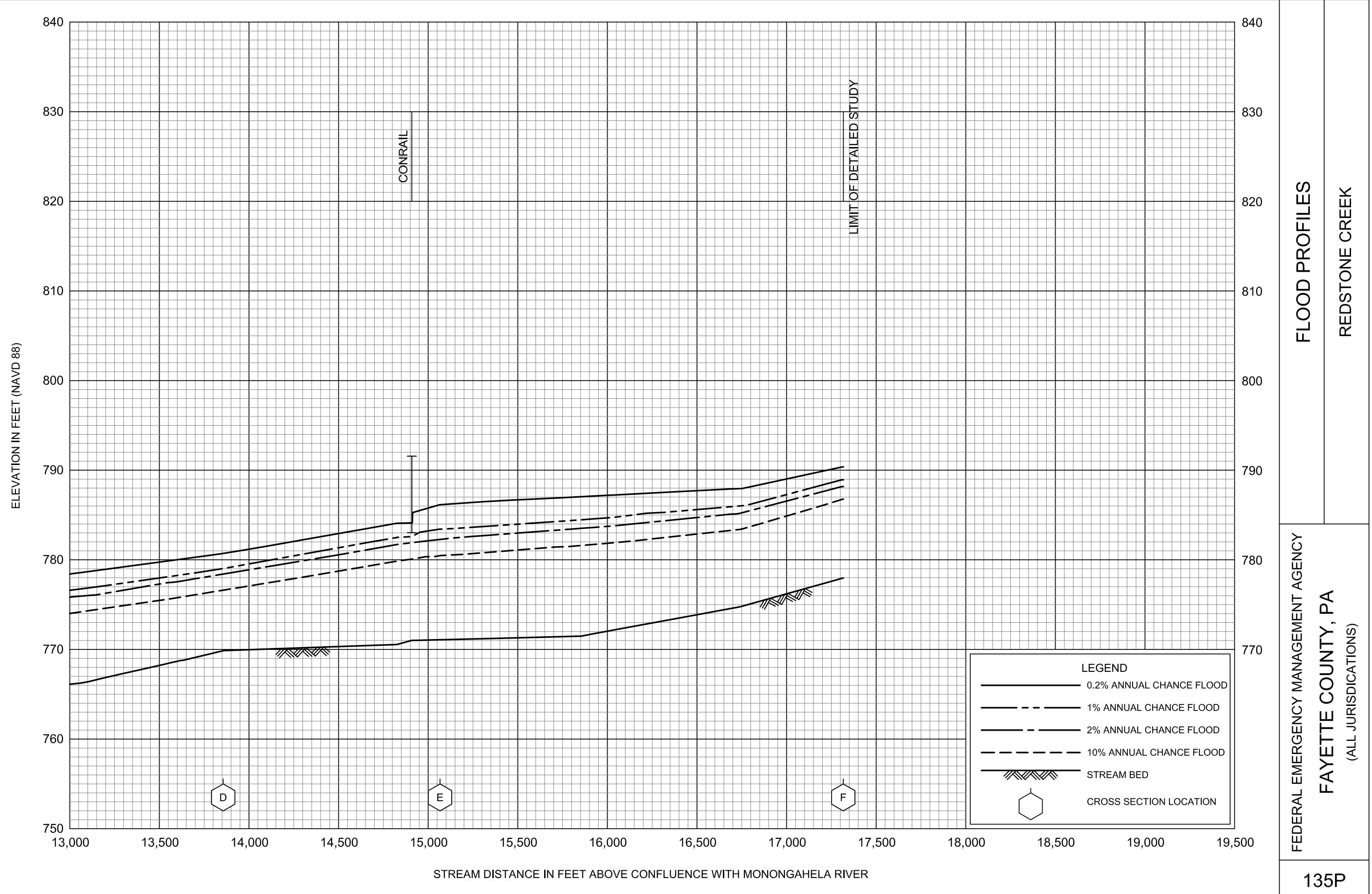


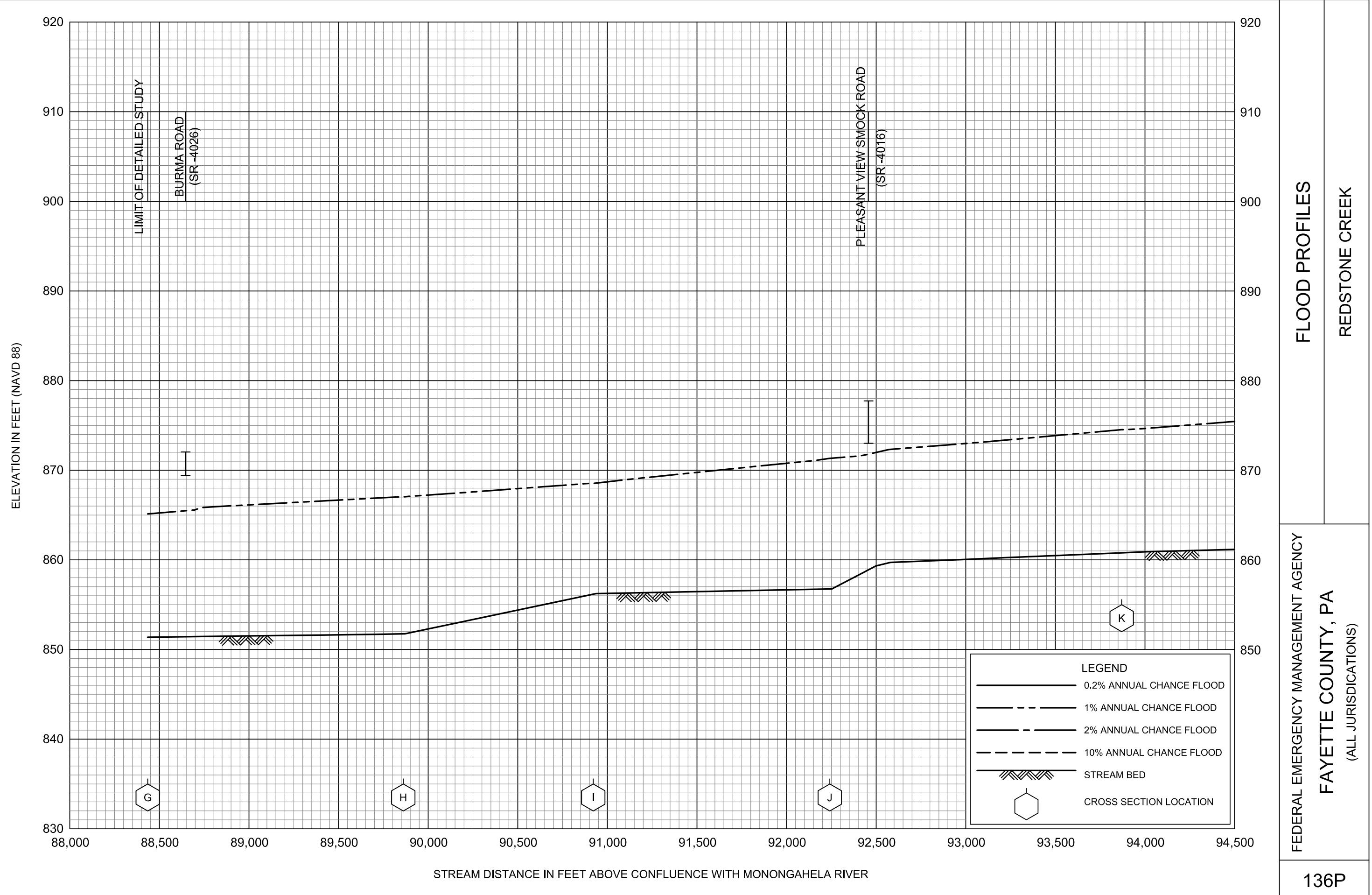


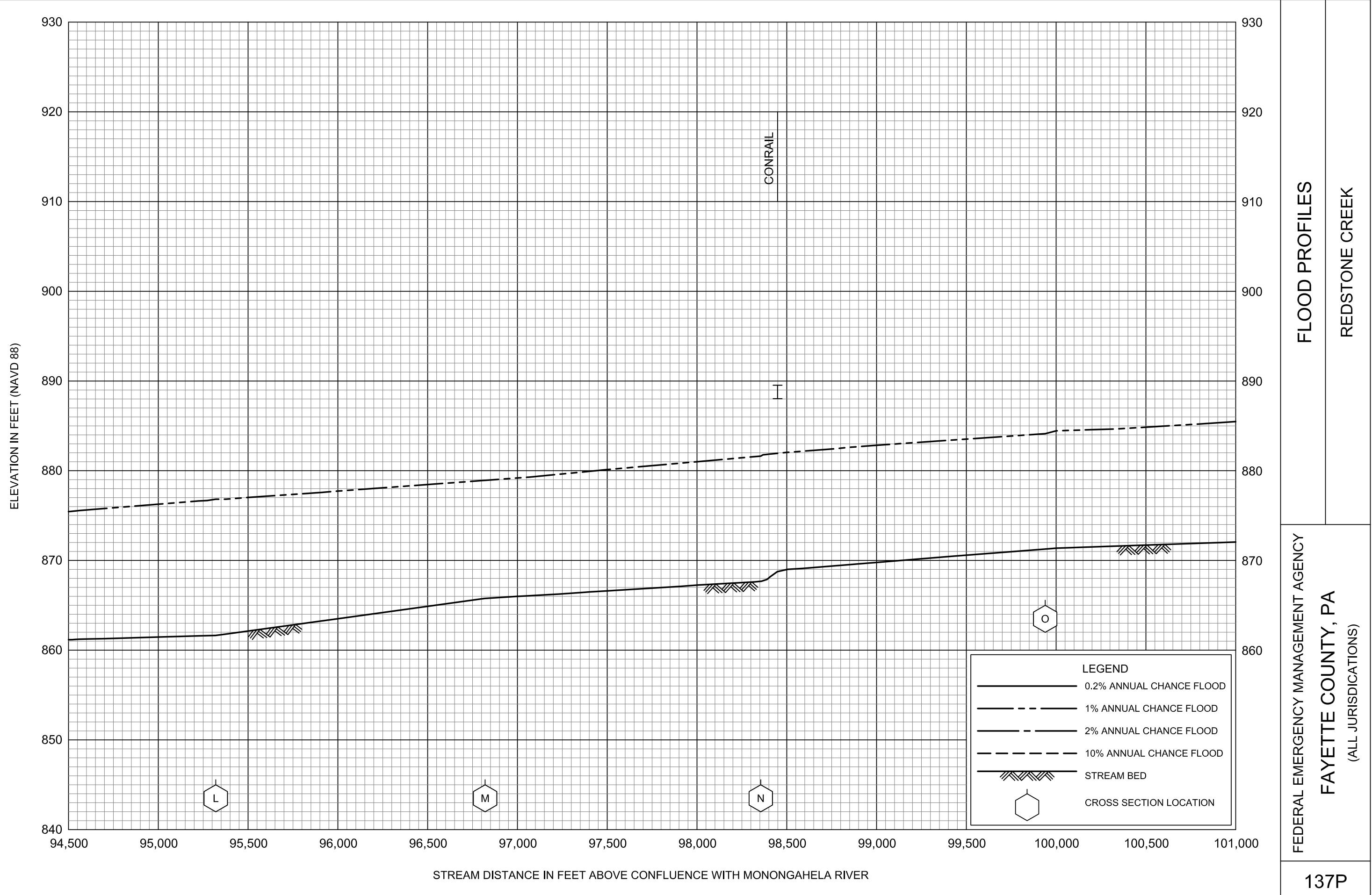


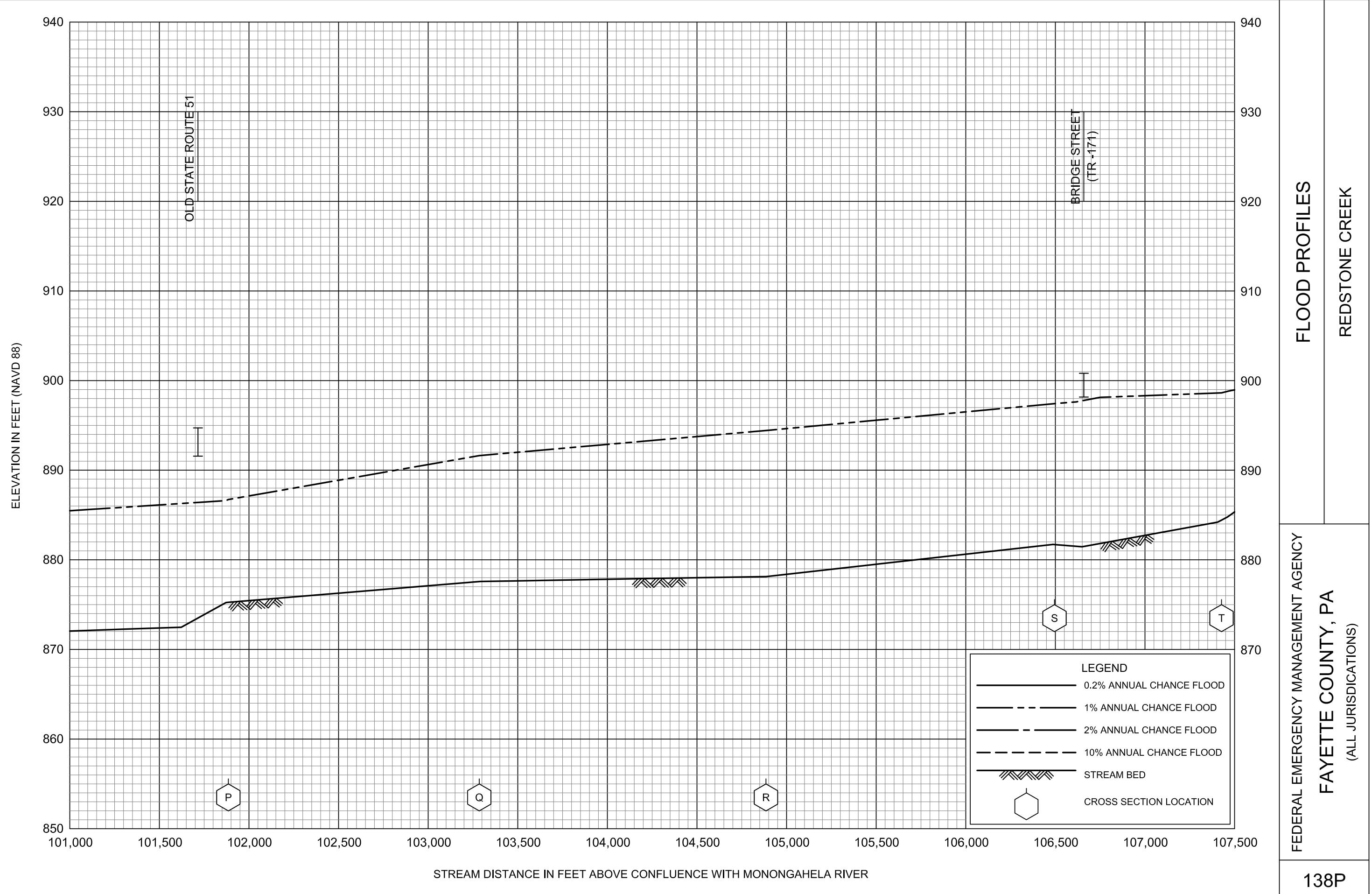


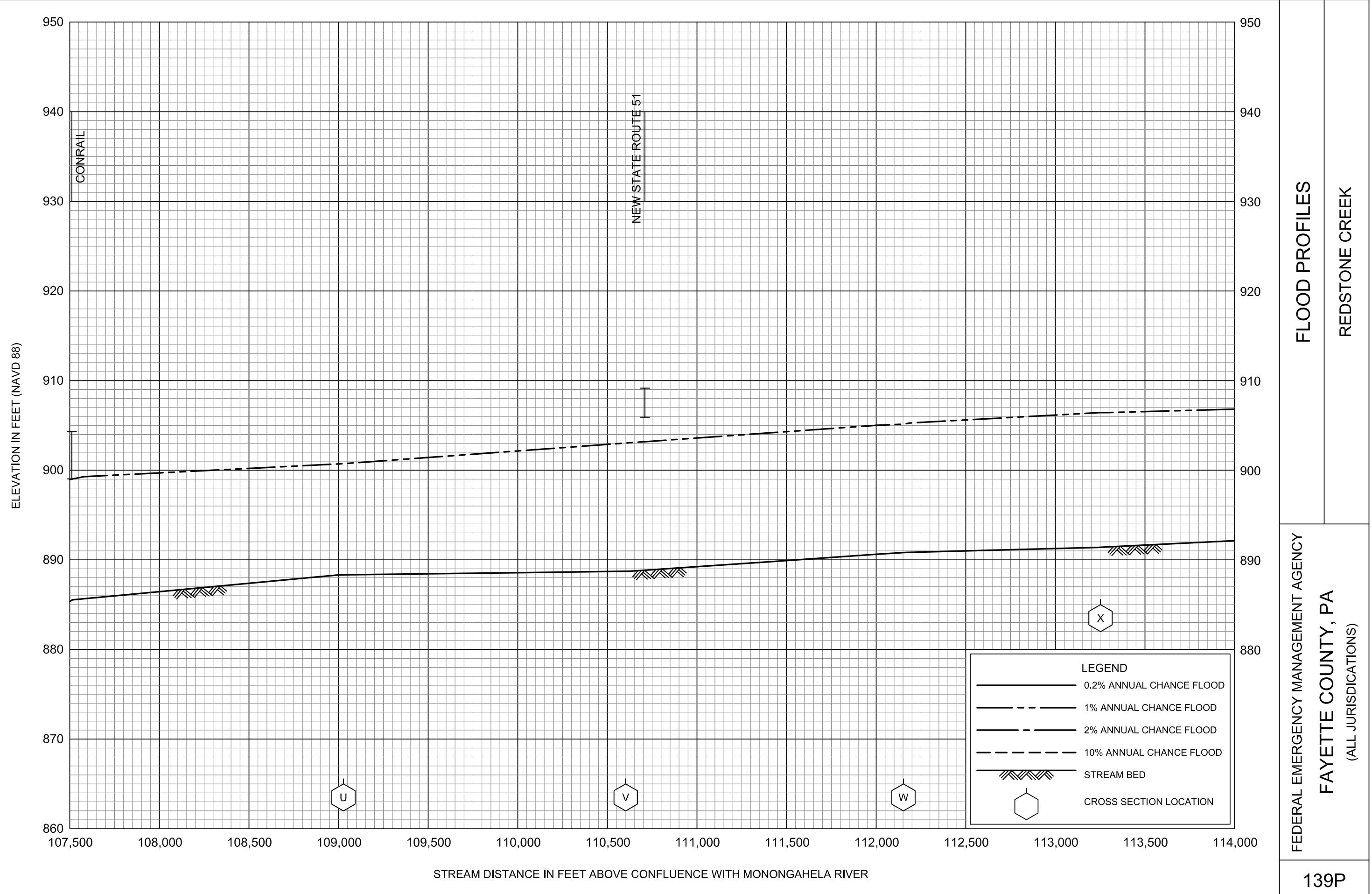


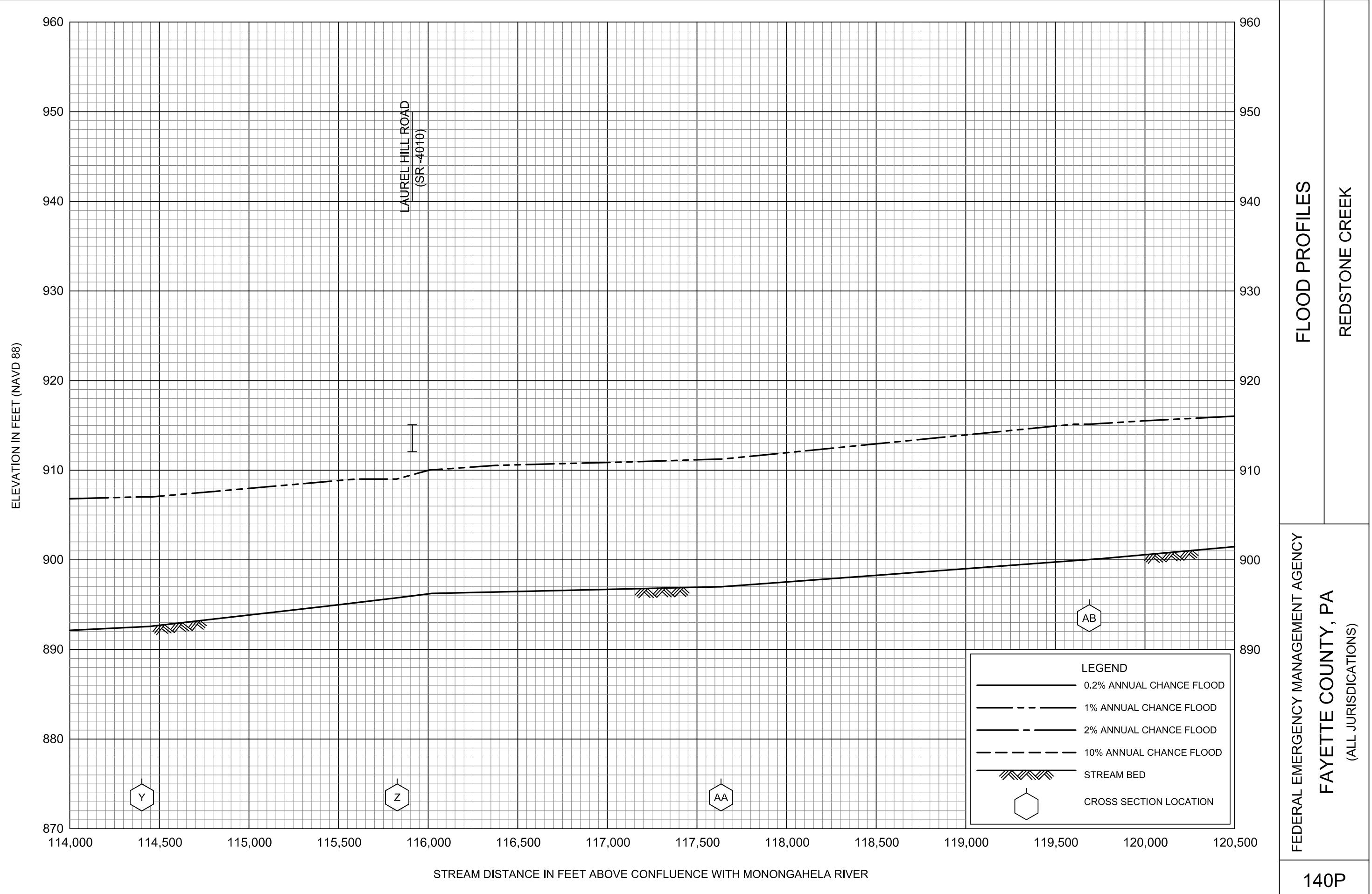


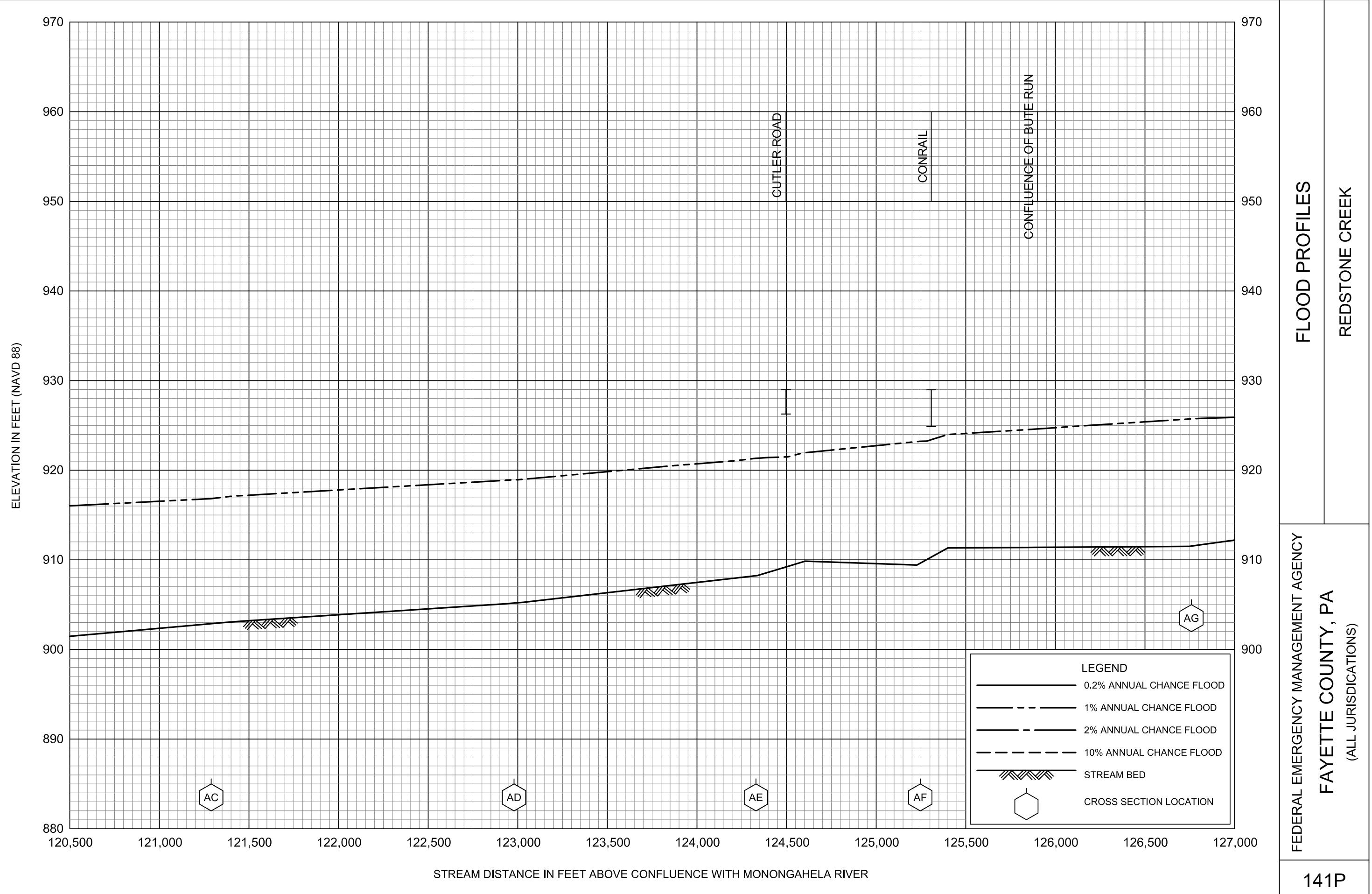


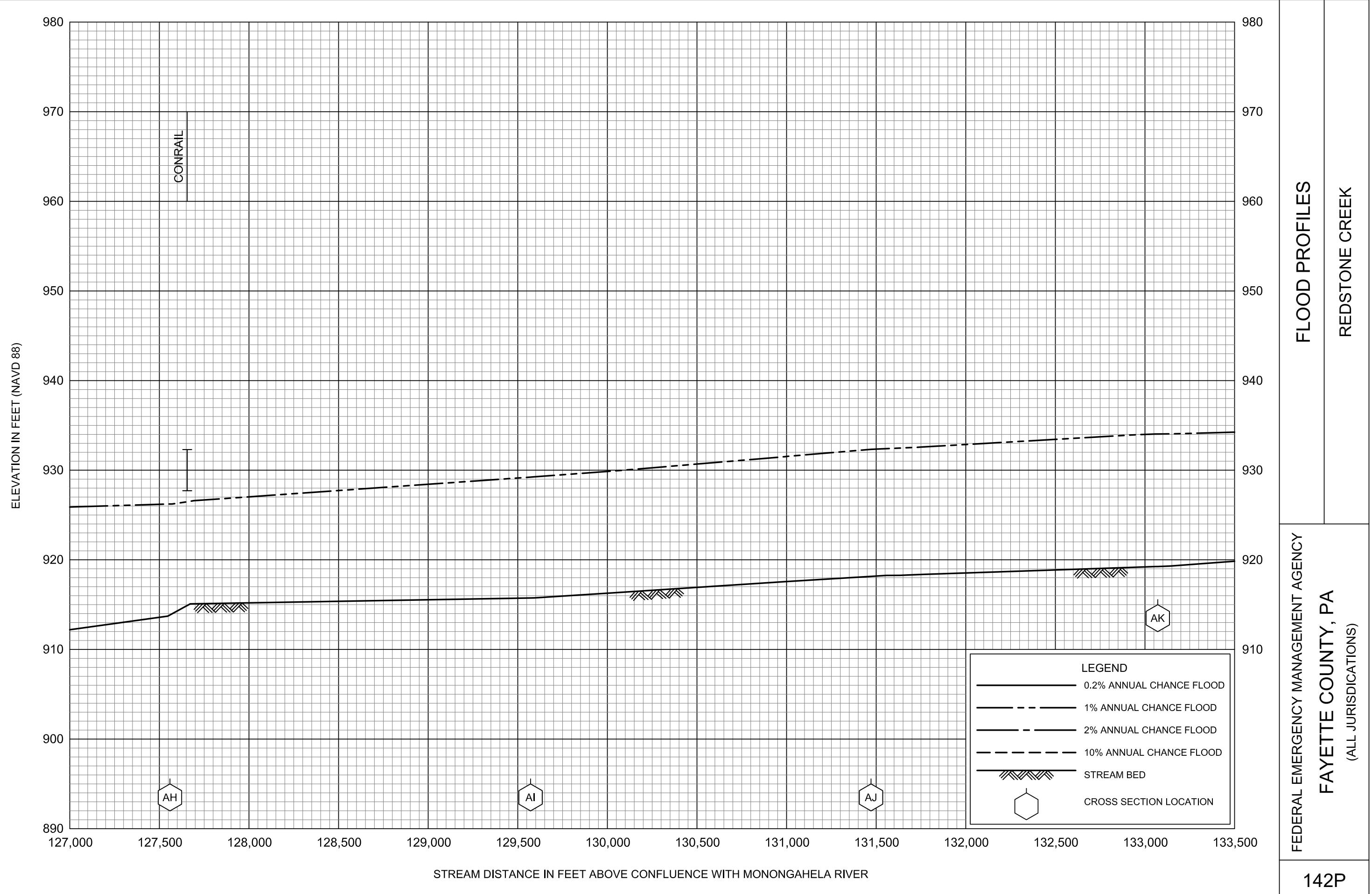


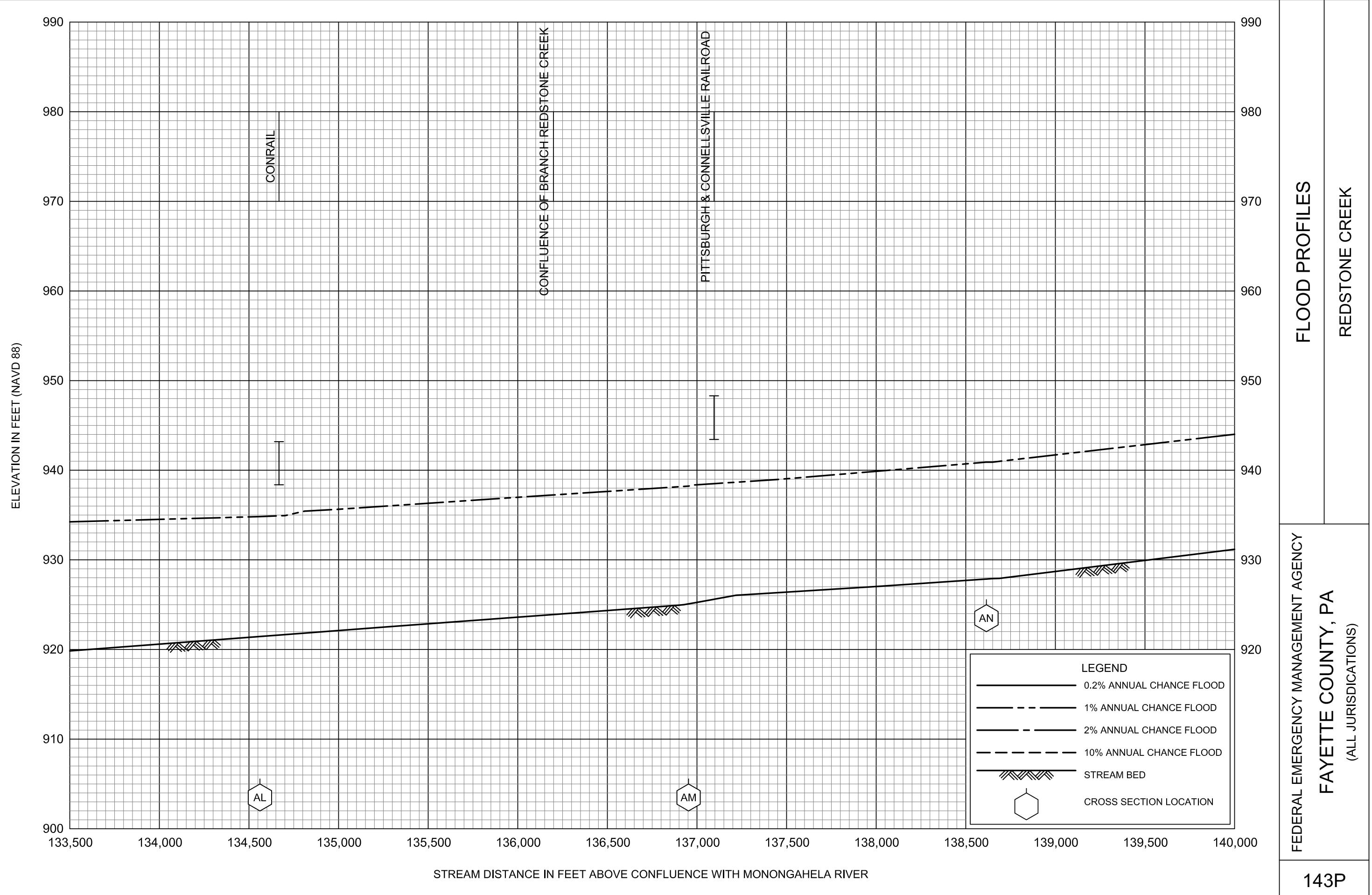


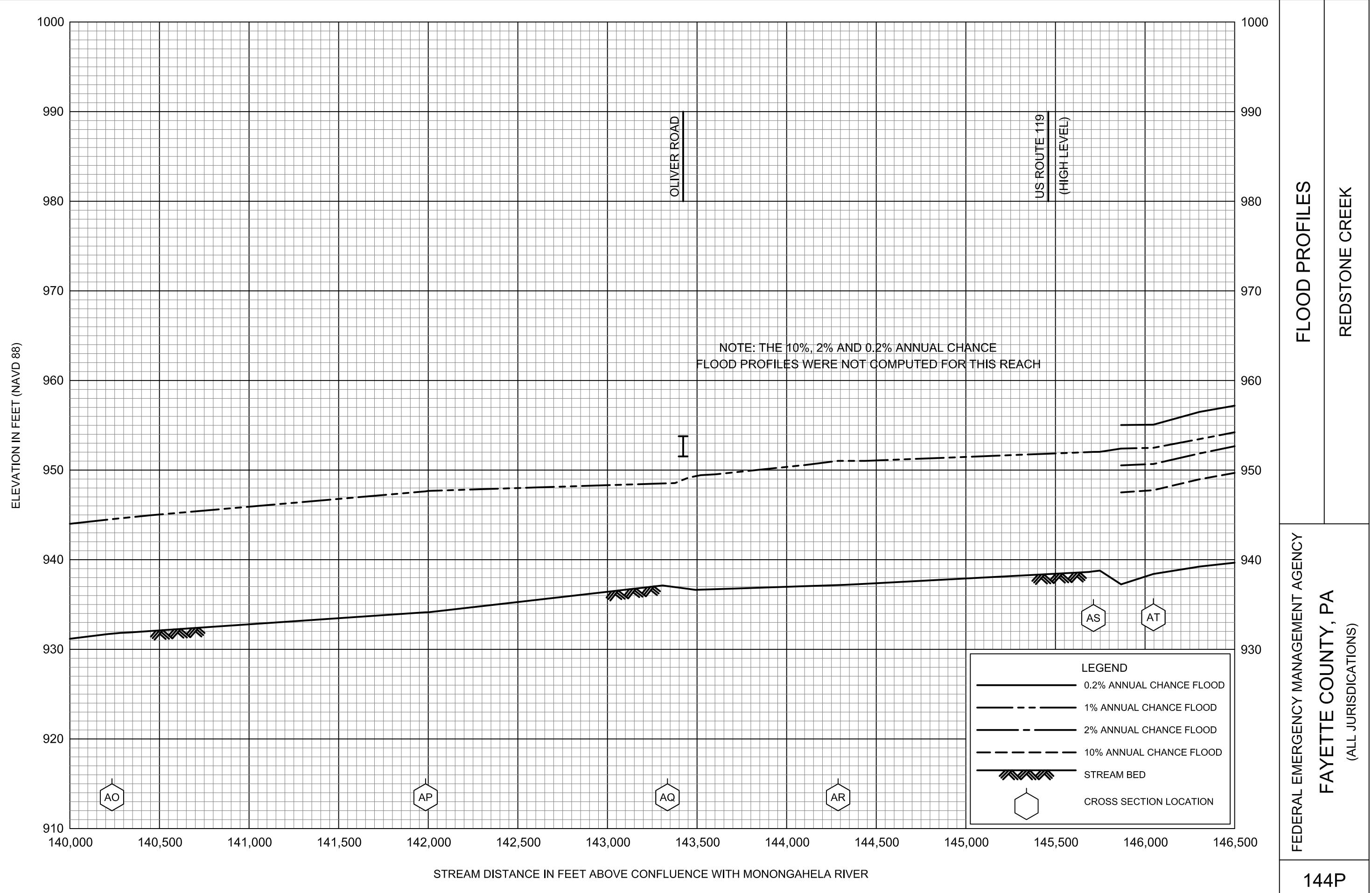


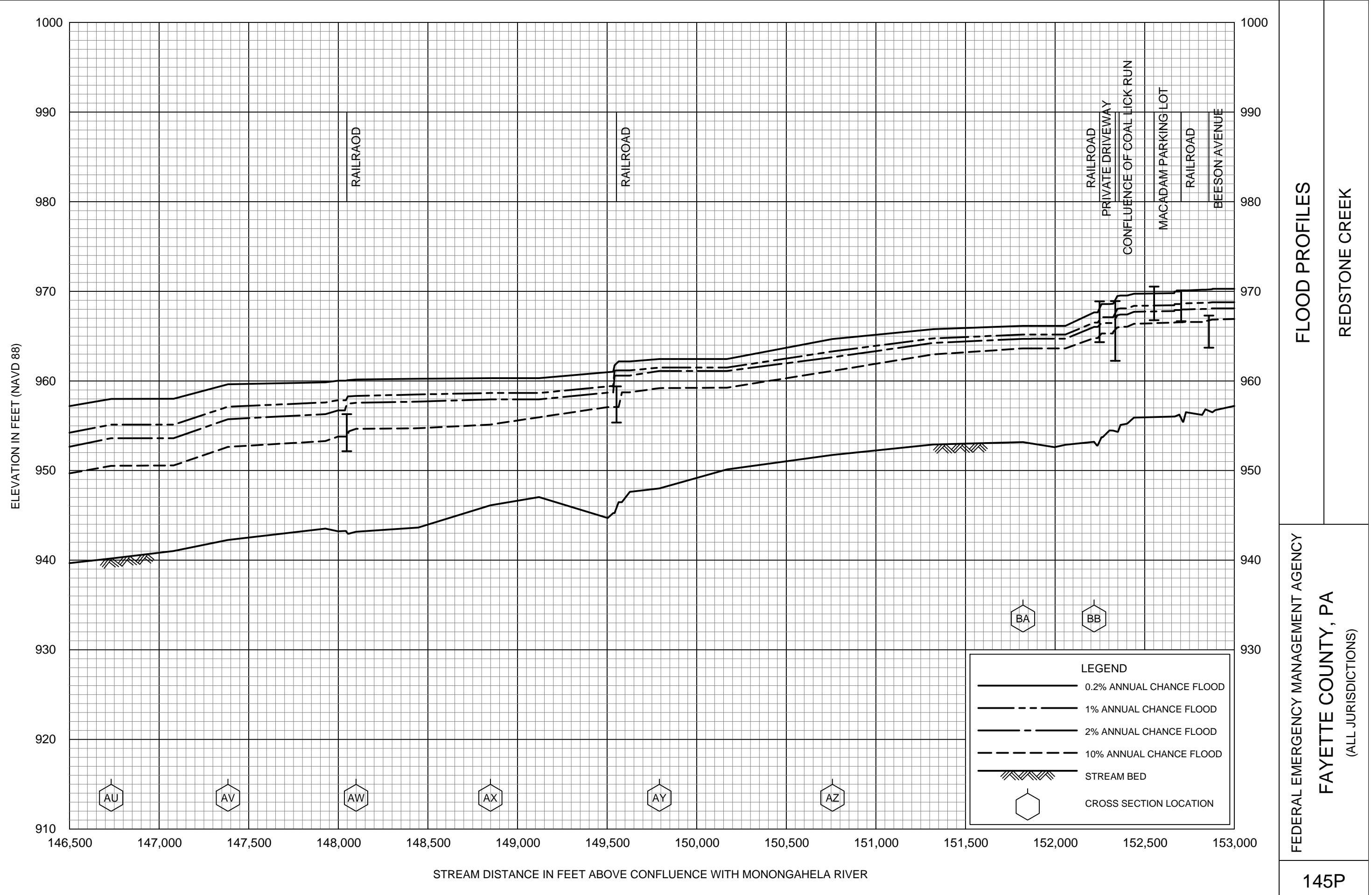


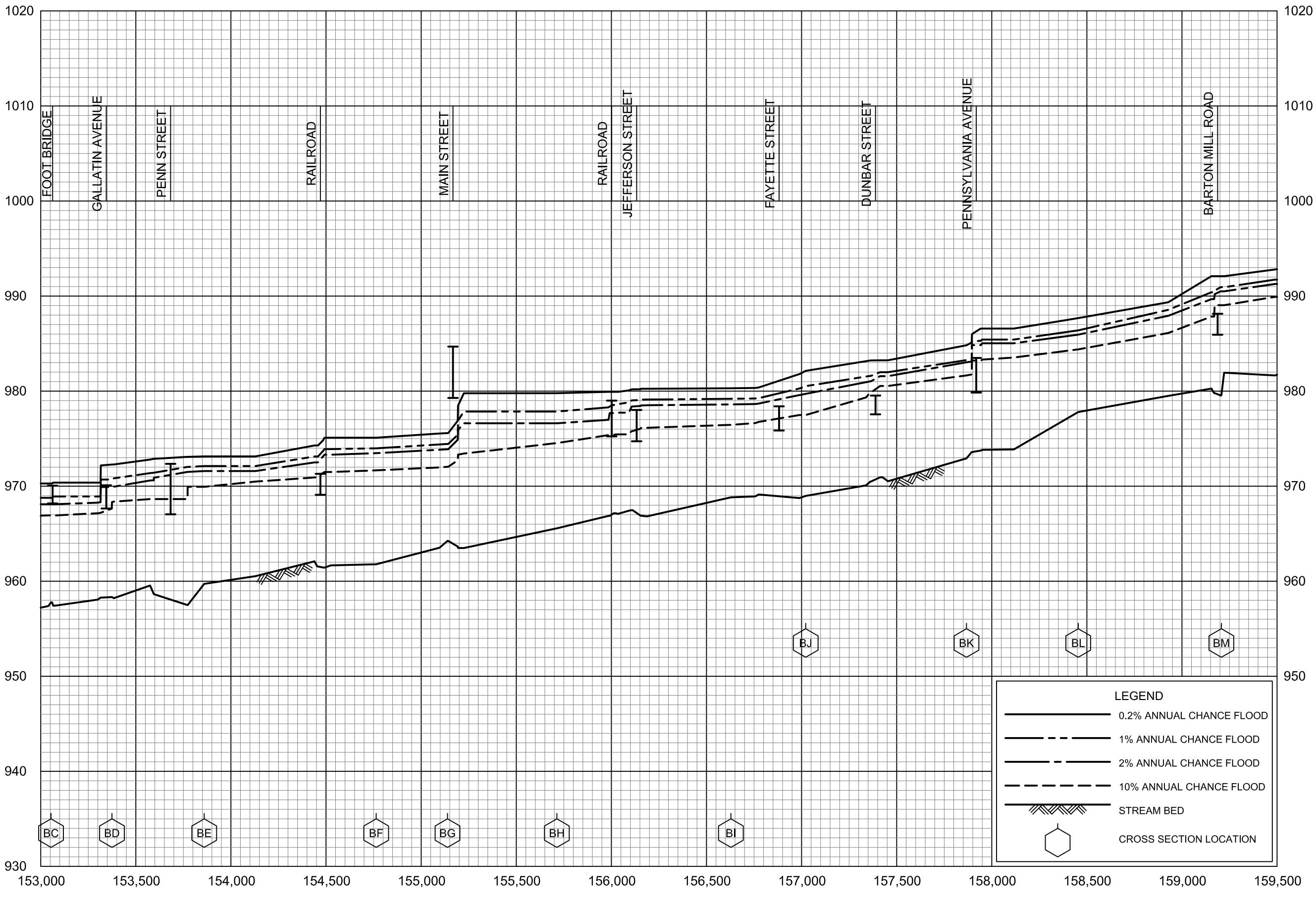












FEDERAL EMERGENCY MANAGEMENT AGENCY
FAYETTE COUNTY, PA
(ALL JURISDICTIONS)

